A
HISTORY OF PHILOSOPHY

BY

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A HISTORY OF PHILOSOPHY

INTRODUCTION

The history of philosophy aims to give a connected account of the different attempts which have been made to solve the problem of existence or to render intelligible to us our world of experience. It is the story of the development of reasoned human thought from its earliest beginnings down to the present time; not a mere chronological enumeration and exposition of philosophical theories, but a study of these in their relation to one another, the times in which they are produced, and the thinkers by whom they are offered. While every system of thought is more or less dependent on the civilization in which it arises, the character of preceding systems, and the personality of its author, it in turn exercises a potent influence on the conceptions and institutions of its own and succeeding ages. The history of philosophy must, therefore, endeavor to insert each world-view in its proper setting, to understand it as a part of an organic whole, to connect it with the intellectual, political, moral, social, and religious factors of its present, past, and future. It must also attempt to trace the line of progress in the history of human speculation: show how the mental attitude called philosophy arises, how the different problems and the solutions that are offered provoke new questions and answers, and what advance has been made, on the different stages, towards reaching the goal.

In dealing with the different systems, we shall be careful to let the authors present their ideas without extensive criticism on our part. It will be found that the history of philosophy is, in a large measure, its own best critic; that a system is continued, transformed, supplemented, or overcome by its successors, that the errors and inconsistencies contained in it are brought to light; and that it is often made the starting-point of new lines

of thought. The historian should assume an impartial and objective attitude in his study, and, so far as he can, guard against obtruding his own philosophical theories into the discussions. It will, however, be impossible to eliminate the personal element altogether; to some extent the historian's preconceptions are bound to shine through his work. They will manifest themselves in many ways: in the emphasis which he lays on particular philosophies, in his notion of what constitutes progress and decline,—even in the amount of space devoted to different thinkers. All this is unavoidable. The philosopher, however, should be permitted to tell his own story without being interrupted by constant objections before he has had the opportunity of stating his case completely. And we should not criticise a system solely in the light of present achievement, that is, measure it by present standards to its hurt. Compared with modern theories, the early Greek world-views seem naïve, childish, and crude, and it would be no great mark of intelligence to ridicule them; whereas, regarded from the standpoint of their times, as the first efforts of a people to understand the world, they may well stand out as epoch-making events. A system of thought must be judged in the light of its own aims and historical setting, by comparison with the systems immediately preceding and following it, by its antecedents and results, by the development to which it leads. Our method of study will, therefore, be historico-critical.

The value of the study of the history of philosophy ought to be apparent. Intelligent persons are interested in the fundamental problems of existence and in the answers which the human race has sought to find for them on the various stages of civilization. Besides, such a study helps men to understand their own and other times; it throws light on the ethical, religious, political, legal, and economic conceptions of the past and the present, by revealing the underlying principles on which these are based. It likewise serves as a useful preparation for philosophical speculation; passing, as it does, from the simpler to the more complex and difficult constructions of thought, it reviews the philosophical experience of the race and trains the mind in abstract thinking. In this way we are aided in working out our own views of the world and of life. The man who tries

to construct a system of philosophy in absolute independence of the work of his predecessors cannot hope to rise very far beyond the crude theories of the beginnings of civilization.

Science and philosophy may be said to have had their origin in religion, or rather, originally science, philosophy, and religion were one: mythology is the primitive attempt to understand the world. Man at first interprets the phenomena which, for some reason or other, largely practical, attract his attention, according to his crude experiences. He projects his own nature into them, fashions them after his own image, *animates* them, regards them as somehow alive and "ensouled." Among many peoples, such vague and indefinite animistic notions are transformed into clear and distinct conceptions of personalities,—of a higher order than human beings, but yet essentially resembling human beings (polytheism). None of these mythological creations, however, can be regarded as the work of single individuals or as the product of logical thought; they are expressions of the collective soul, in which imagination and will play the most important rôle.

A universal history of philosophy would include the philosophies of all peoples. Not all peoples, however, have produced real systems of thought, and the speculations of only a few can be said to have had a history. Many do not rise beyond the mythological stage. Even the theories of Oriental peoples, the Hindus, Egyptians, Chinese, consist, in the main, of mythological and ethical doctrines, and are not thoroughgoing systems of thought: they are shot through with poetry and faith. We shall, therefore, limit ourselves to the study of the Western countries, and begin with the philosophy of the ancient Greeks, on whose culture our own civilization, in part, rests. We shall follow the customary classification of universal history and divide our field into Ancient Philosophy, Medieval or Christian Philosophy, and Modern Philosophy.

The sources of our study will be (1) the works of the philosophers or the fragments of their writings, in cases where only the latter are extant: *primary sources.* (2) In the absence of either of these, we have to depend, for our knowledge of their teachings, on the most trustworthy and accurate accounts of them by others. Among the sources which will help us here are

expositions of the lives and doctrines of particular philosophers, general and special treatises on the history of philosophy, criticisms of certain teachings, and references to them in various books. Such *secondary sources* are indispensable where the primary sources have disappeared. But even when this is not the case, the secondary sources are of great value in so far as they may throw light on the systems with which they deal. The historian of philosophy will seek help from all works that contribute to our knowledge of the subject, and among these the secondary sources play an important part. He will also appeal to whatever fields of research may give him an understanding of the spirit of the times under examination: to the history of all human activities, such as science, literature, art, morals, education, politics, and religion.

Works on the history of philosophy (including ancient, medieval, and modern). Introductory: K. Fischer, *History of Modern Philosophy,* vol. I, Book I, transl. by Gordy; B. D. Alexander, *A Short History of Philosophy;* Weber, *History of Philosophy,* transl. by Thilly; Schwegler, *History of Philosophy,* transl. by Seelye; A. K. Rogers, *A Student's History of Philosophy;* Windelband, *History of Philosophy,* transl. by Tufts; Turner, *History of Philosophy;* Stöckl, *Handbook of the History of Philosophy,* transl. by Coffey; Cushman, *History of Philosophy.* See also: J. B. Bury, *History of the Freedom of Thought;* J. M. Robertson, *Short History of Free Thought,* 2 vols.

More advanced works: J. E. Erdmann, *History of Philosophy,* 3 vols., transl. by Hough; Ueberweg, *History of Philosophy,* 3 vols., transl. by Morris (from the German ed. of 1874, which has been frequently revised and supplemented by M. Heinze and is now in its 10th ed.); Hegel, *Lectures on the History of Philosophy,* 3 vols., transl. by Haldane; *Allgemeine Geschichte der Philosophie* (prepared by a number of German scholars for the series *Kultur der Gegenwart;* contains also sections on primitive philosophy, Hindu, Mohammedan and Jewish, Chinese, and Japanese philosophy); Deussen, *Allgemeine Geschichte der Philosophie,* vol. I (three parts) contains Oriental philosophy; vol. II, Greek philosophy and philosophy of the Bible; *Grosse Denker,* by many German scholars; Schwarz, *Der Gottesgedanke in der Philosophie.*

Histories of special subjects: Lange, *History of Materialism,* 3 vols., transl. by Thomas; Lasswitz, *Geschichte der Atomistik;* Willmann, *Geschichte des Idealismus,* 3 vols.; R. Richter, *Der Skeptizismus in der Philosophie,* 2 vols. Logic: Prantl, *Geschichte der Logik,* 4 vols.; Uphues, *Geschichte der Philosophie als Erkenntniskritik;* Adamson, *Short History of Logic.* Psychology: Dessoir, *Outlines of the History of Psychology,* transl. by Fisher; Klemm, *History of Psychology,* transl. by Wilm; J. M. Baldwin, *History of Psychology,* 2 vols.; Bosanquet,

History of Æsthetics; Schasler, *Kritische Geschichte der Aesthetik.* Ethics: Paulsen, *System of Ethics,* ed. and transl. by Thilly, pp. 33-215; Eucken, *Problem of Human Life,* transl. by Hough and Boyce Gibson; Sidgwick, *History of Ethics;* R. A. P. Rogers, *Short History of Ethics;* Wundt, *Ethics,* vol. II; Martineau, *Types of Ethical Theory,* 2 vols. (Hyslop, *Elements of Ethics,* Seth, *Study of Ethical Principles,* Thilly, *Introduction to Ethics,* contain historical material.) Rand, *Classical Moralists* (selections from writers); Watson, *Hedonistic Theories from Aristippus to Spencer;* Janet, *Histoire de la philosophie morale et politique.* Politics: Pollock, *History of the Science of Politics;* Dunning, *History of Political Theories;* Bluntschli, *Geschichte des allgemeinen Staatsrechts.* Education: P. Munroe, *Text-book in the History of Education;* Graves, *History of Education,* 3 vols.; Davidson, *History of Education;* Williams, *History of Education;* Schmid, *Geschichte der Erziehung.* Science: Whewell, *History of Inductive Sciences,* 3 vols.; Bryk, *Geschichte der Naturwissenschaften;* German works by Strunz, Bryk, Schultze; H. F. Osborn, *From the Greeks to Darwin;* Hannequin, *Études d'histoire des sciences;* histories of mathematics by Cajori, Ball, Cantor, Montucla, Chasles; of chemistry by Kopp; of astronomy by Berry, Dreyer, Wolf, Delambre.

Dictionaries of philosophy: Baldwin, 2 vols.; German works by Eisler, Mauthner, Kirchner; Eisler, *Philosophen-Lexikon.* Consult also articles in encyclopedias, especially *Encyclopedia Britannica,* Hastings, *Encyclopedia of Religion and Ethics, Catholic Encyclopedia, Jewish Encyclopedia,* P. Munroe, *Cyclopedia of Education.*

Bibliographies in Rand, *Bibliography of Philosophy;* Baldwin, *Dictionary of Philosophy,* vol. III; Ueberweg-Heinze, *op. cit.,* 10th German ed. Complete bibliographies of books published since 1895 in *Archiv für systematische Philosophie;* since 1908 in Ruge, *Philosophie der Gegenwart.*

Philosophical journals: *Philosophical Review, International Journal of Ethics, Journal of Philosophy, Psychology, and Sc. Methods, Monist, Mind, Proceedings of Aristotelian Society, Archiv für Philosophie, Kant-Studien, Zeitschrift für Philosophie, Vierteljahresschrift für wiss. Philosophie, Zeitschrift für positivistische Philosophie, Philosophisches Jahrbuch, Jahrbuch für Philosophie, Logos, Revue philosophique, Revue de métaphysique et de morale, Revue de philosophie, Année philosophique, Revue des sciences philosophiques et théologiques, Revue néoscolastiques, Revue thomiste, Annales de philosophie chrétienne, Rivista di filosofia, Rivista filosofica, Rivista di filosofia e scienze affini, La cultura filosofica, Rivista neoscolastica.*

Psychological journals: *Psychological Review, American Journal of Psychology, British Journal of Psychology, Archiv für Psychologie, Psychologische Studien, Zeitschrift für Psychologie, Archives de psychologie, La revue psychologique, Année psychologique, Rivista di psicologia, Annales di psicologia.*

GREEK PHILOSOPHY

PHILOSOPHY OF NATURE

1. Origin and Development of Early Greek Thought

Few of the ancient peoples advanced far beyond the mythological stage, and perhaps none of them can be said to have developed a genuine philosophy except the Greeks. It is for this reason that we begin our account with them. They not only laid the foundations upon which all subsequent systems of Western thought have been reared, but formulated nearly all the problems and suggested nearly all the answers with which European civilization occupied itself for two thousand years. Their philosophy is one of the best examples of the evolution of human thinking from simple mythological beginnings to complex and comprehensive systems that any people has furnished. The spirit of independence and the love of truth which animate their thinkers have never been surpassed and rarely equaled. For these reasons the study of Greek philosophy ought to be an attractive and valuable discipline to the student interested in higher speculative thought.

History of Greek Philosophy

By the history of Greek philosophy we mean the intellectual movement which originated and developed in the Hellenic world. We shall include in it, however, not only the systems of the Greeks themselves, but also those which exhibit the essential features of Greek thinking and which are manifestly the products of Hellenic civilization, whether they flourish at Athens, Rome, Alexandria, or in Asia Minor.

The people whose philosophy we are to study inhabited the mountain peninsula of Greece, a territory whose natural characteristics were favorable to the production of a strong and active race, and whose many harbors, while encouraging navigation and commerce, furnished an

Environment

outlet for emigration over the islands to the lands beyond. Greek colonies were established in an unbroken chain from the mainland to the coasts of Asia Minor and, eventually, to Egypt, Sicily, Southern Italy, and the Pillars of Hercules; without losing touch with the mother country, these colonies enjoyed the benefits which active contact with peoples of different customs, traditions, and institutions is apt to bring. The wonderful economic progress resulting from such conditions, the development of commerce, industry, and trade, the rise of cities, the accumulation of wealth, and the increasing division of labor exercised a profound influence on the social, political, intellectual, and religious life of the entire Greek world and opened the way to a new and richer civilization. This physical and human environment helped to stimulate both intellect and will; it gave men a broader outlook upon life and the world, quickened the spirit of criticism and reflection, led to the development of unique personalities, and made possible a varied progress along all lines of human thought and action. To a people naturally endowed with keen and quick intelligence, a burning thirst for knowledge, a fine sense of beauty, and practical energy and ambition, it supplied the materials upon which to try its powers and talents; and enabled it to make rapid progress in the field of politics, religion, morals, literature, and philosophy.

Politics

The political fortunes of the Hellenic city-states, on the mainland and in the colonies, exhibit certain common characteristics: everywhere we find an evolution from the patriarchal monarchy through the aristocracy to democracy. The society described by the Homeric epics is a caste society and the form of government a patriarchal monarchy. The acquisition of wealth and culture by the few leads to the establishment of aristocratic forms of government and, as time goes on, to the rise of oligarchies. With changing social conditions, a citizen class (the Demos) arises and begins to dispute the leadership of the privileged class; and through the efforts of bold and ambitious men, who wrest the power from the lords, "tyrannies" are established throughout the Hellenic world, during the seventh and sixth centuries B.C. In the end, the people themselves assume the reins of government, and the tyranny gives way to the democracy.

We may view these conditions as the result of the awakening of the Greek consciousness. The new movement is both a symptom and a cause of enlightenment: it is the outward sign of growing reflection and criticism of the traditional; it issues in a protest against the old institutions and in a demand for reform. The history of Greek literature before the sixth century B.C. reveals the development of a spirit of reflection and criticism similar to that expressing itself in political life. The Homeric cheerfulness and objectivity, characteristic of the naïveté of childhood, gradually disappear; the poets become less optimistic, more critical and subjective. Already in Homer we find occasional moral reflections on the behavior of men, the foolishness of mortals, the misery and transitoriness of life, and the wickedness of injustice. In Hesiod the note of criticism and pessimism grows louder; his *Works and Days* is a moral handbook that attacks the foibles of the age and offers moral maxims and practical rules of life, praising the home-spun virtues and lamenting the decline of the good old days. In mournful and satiric strain, poets of the seventh century (Alcæus, Simonides, Archilochus) decry the rise of the *tyrannis* and deplore the weakness of men, urging them, however, to bear their lot bravely and to leave the outcome to the gods. The didactic and pessimistic spirit is still more marked in the poetry of the sixth century; the political fortunes of the people are made the subject of discussion, and the new order of things is condemned, often with great bitterness. To this period belong the fable-writer Æsop and the so-called *gnomic* poets (Solon, Phocylides, Theognis), whose wise maxims embodying ethical reflections may be characterized as an embryonic moral philosophy. The truth is, the individual is beginning to analyze and criticise life,—not merely living it, but pondering on it;—he is no longer content to give voice to the customary conceptions and ideals of his race, but is prompted to set forth his own personal ethical, political, and religious thoughts and yearnings. Eventually, this spirit of inquiry and discontent, which results from larger and more complex experiences, leads to a philosophical study of human conduct in the form of theories of ethics and politics.

Literature

The religious development follows along similar lines. Origi-

nally a form of nature-worship, the Greek religion develops into polytheism and creates a society of gods peopled by the imagination of the poets with a galaxy of superior beings, who lead a historical life. In this field, too, the spirit of reflection and criticism does its work and helps to make religion ethical and rational. Reflection on the character and conduct of the gods, as portrayed by Homer, and the refinement of the moral consciousness bring about a purer conception of Olympus: with the progress of civilization the gods themselves become moral and Zeus is conceived as the ethical head of the divine social order, the protector of right on earth and in heaven.

Religion

The metaphysical need, on the other hand, finds expression in theories of the gods, their origin and relation to one another and the world. Men begin to think about the traditional mythology, asking themselves how such gods arose; they attempt, in a crude way, to account for things, using the traditional mythology as the basis of their speculations. The oldest example of such a primitive genealogy of the gods, or *theogony*, is the *Theogony* of Hesiod. To the same class of literature belong the theogony of Pherecydes of Syros (540 B.C.) and the Orphic cosmogonies, which, perhaps, rest on an older theogony (perhaps of the sixth century B.C.), but in their present form do not date back farther than the first century B.C. According to the *Theogony* of Hesiod, Chaos first arose, then Gaia (the earth), then Eros (love). Out of Chaos came Erebos (darkness) and Nux (night) and from the union of the two, Æther (light) and Hemera (day). The earth brings forth the sea and, in union with the heaven (Uranos), the rivers. From the seed of Uranos springs Aphrodite (love); that is, the rains from heaven cause life to germinate in nature. The attempt is here made to explain the origin of things, not in a scientific and logical manner, as we understand these terms, but with the aid of the poetic imagination and the popular mythology. The poet asks himself how the things and the occurrences around him came about, and accounts for them, in terms of simple every-day experiences, as the effects of generation or human volition: Darkness and Night together generate the Day; the Earth fructified by Heaven gives birth to the rivers.

Theogonies, though not philosophy, are a preparation for philosophy. Already in the mythological notions there is present a germ of philosophical thought, a desire for some kind of explanation, even though the demand is rooted in the will and easily satisfied by pictures of the imagination. The theogonies and cosmogonies represent an advance over the mythologies; they are an attempt to rationalize the mythical world and to explain the origin of the beings supposed to govern occurrences in nature and events in the life of man. These theories, however, are still, in a large measure, such as satisfy the poetical imagination rather than the logical intellect, and they appeal to supernatural forces and agencies rather than to natural causes. Philosophy arises when fancy is superseded by reason, imagination by intellect; when the supernatural agencies are abandoned, as principles of explanation, and facts of experience made the basis of investigation and explanation. It is an effort to account for things and occurrences in a more or less impartial and unprejudiced way, independently of the popular mythology, and unhampered by immediate practical needs. Appearing in Greece during the sixth century B.C., in an age of enlightenment, it is the natural outcome of the spirit of inquiry which we have described and which expressed itself in all the forms of Greek mental life.

Philosophy

Gomperz, *The Greek Thinkers,* vol. I; Zeller, *Outlines of the History of Greek Philosophy,* and *Philosophy of the Greeks,* vol. I; *Encyclopedia Britannica,* articles under Greece, Greek Art, Literature, Religion, etc.

Greek philosophy begins with an inquiry into the essence of the objective world. It is, at first, largely interested in external nature (philosophy of nature), and only gradually turns its eye inward, on man himself, or becomes humanistic. The first great problem is: What is nature and, therefore, man? the second: What is man and, therefore, nature? The shifting of the interest from nature to man leads to the study of human-mental problems: the study of the human mind and human conduct, the study of logic, ethics, psychology, politics, poetics. The attention is next centered, more particularly, upon the ethical problem: What

Survey of Greek Philosophy

is the highest good, what is the end and aim of life? Ethics is made the main issue; logic and metaphysics are studied as aids to the solution of the moral question. Finally, the problem of God and man's relation to him, the theological problem, is pushed into the foreground, and Greek philosophy ends, as it began, in religion.

(1) The first great problem was taken up in what we may call the Pre-Sophistic period, which extends, let us say, from about 585 to the middle of the fifth century B.C. The earliest Greek philosophy is naturalistic: its attention is directed to nature; it is mostly hylozoistic: it conceives nature as animated or alive; it is ontological: it inquires into the essence of things; it is mainly monistic: it seeks to explain its phenomena by means of a single principle; it is dogmatic: it naïvely presupposes the competency of the human mind to solve the world-problem. The scene of the philosophy of this period is the colonial world; it flourishes in Ionia, Southern Italy, and Sicily.

(2) The period of the Sophists, who belong to the fifth century, is a period of transition. It shows a growing distrust of the power of the human mind to solve the world-problem and a corresponding lack of faith in traditional conceptions and institutions. This movement is skeptical, radical, revolutionary, indifferent or antagonistic to metaphysical speculation; in calling attention to the problem of man, however, it makes necessary a more thorough examination of the problem of knowledge and the problem of conduct, and ushers in the Socratic period. Athens is the home of this new enlightenment and of the great schools of philosophy growing out of it.

(3) The Socratic period, which extends from 430 to 320 B.C., is a period of reconstruction. Socrates defends knowledge against the assaults of skepticism, and shows how truth may be reached by the employment of a logical method. He also paves the way for a science of ethics by his efforts to define the meaning of the good. Plato and Aristotle build upon the foundations laid by the master and construct rational theories of knowledge (logic), conduct (ethics), and the State (politics). They likewise work out comprehensive systems of thought (metaphysics), and interpret the universe in terms of mind, or reason, or spirit. We may, therefore, characterize this philosophy as critical: it

investigates the principles of knowledge; as rationalistic: it accepts the competence of reason in the search after truth; as humanistic: it studies man; as spiritualistic or idealistic: it makes mind the chief factor in the explanation of reality. It is dualistic in the sense that it recognizes matter as a secondary factor.

(4) The last period, which extends from 320 B.C. to 529 A.D., when the Emperor Justinian closed the schools of the philosophers, is called the Post-Aristotelian. The scene is laid in Athens, Alexandria, and Rome. Two phases may be noted, an ethical and a theological one. (a) The paramount question with Zeno, the Stoic, and Epicurus, the hedonist, is the problem of conduct: What is the aim of rational human endeavor, the highest good? The Epicureans find the answer in happiness; the Stoics in a virtuous life. Both schools are interested in logic and metaphysics: the former, because such knowledge will destroy superstition and ignorance and contribute to happiness; the latter, because it will teach man his duty as a part of a rational universe. The Epicureans are mechanists; according to the Stoics, the universe is the expression of divine reason. (b) The theological movement, which took its rise in Alexandria, resulted from the contact of Greek philosophy with Oriental religions. In Neoplatonism, its most developed form, it seeks to explain the world as an emanation from a transcendent God who is both the source and the goal of all being.

Consult the general histories of philosophy and special works mentioned on pages 4 and 5; also the following: Marshall, *History of Greek Philosophy;* Windelband, *History of Ancient Philosophy,* transl. by Cushman; Zeller, *Outlines of History of Greek Philosophy,* transl. by Alleyne and Abbott; Benn, *Philosophy of Greece,* 2 vols.; J. Burnet, *History of Greek Philosophy;* Adamson, *Development of Greek Philosophy;* Schwegler, *Geschichte der griechischen Philosophie.*

More advanced works: Zeller, *Philosophy of the Greeks* (the standard work), transl. by Alleyne and others, 9 vols.; Gomperz, *Greek Thinkers,* transl. by Magnus, 4 vols.; M. Wundt, *Geschichte der griechischen Philosophie,* 2 vols.; Döring, *Geschichte der griechischen Philosophie,* 2 vols.; Siebeck, *Untersuchungen zur Philosophie der Griechen,* 2d ed.

Special works: H. O. Taylor, *Ancient Ideals;* Mahaffy, *History of Greek Civilization,* and *What we Owe to the Greeks;* Cornford, *From Religion to Philosophy* (treats Greek philosophy as an evolution from Greek religion); Robert Eisler, *Weltenmantel und Himmelszelt* (Greek

philosophy a continuation of Iranian traditions of mysteries of Asia Minor and India); Campbell, *Religion in Greek Literature;* Caird, *Evolution of Theology in the Greek Philosophers,* 2 vols.; Rohde, *Psyche;* Gilbert, *Griechische Religionsphilosophie;* Krische, *Die theologischen Lehren der griechischen Denker;* Heinze, *Lehre vom Logos,* etc.; Aall, *Geschichte der Logosidee,* etc. Logic: Beare, *Greek Theories of Elementary Cognition;* German works by Natorp and Freytag. Psychology: works by Siebeck (from Aristotle to Thomas of Aquino) and Chaignet. Ethics: by Schmidt, Luthardt, Ziegler, Köstlin; Denis, *Histoire des théories et des idées morales dans l'antiquité;* also Heinze, *Eudämonismus in der griechischen Philosophie.* Education: works by Mahaffy and Laurie; Davidson, *Aristotle and Ancient Educational Ideals.* Science: histories of mathematics by Gow, Allman, Brettschneider, Hankel.

Histories of Greece: Bury, Grote (12 vols.), Meyer (5 vols.). Histories of Greek literature by Jevons, Murray, Croiset, Mahaffy (3 vols.), Christ, Bergkh (4 vols.).

For accounts of the original sources see Windelband, *Ancient Philosophy,* pp. 8-11; Zeller, *Outlines,* pp. 7-14; Ueberweg-Heinze, Part I, § 7.

Collections of fragments and passages relating to philosophers by Mullach, 3 vols., Ritter and Preller, Diels, *Fragmente der Vorsokratiker* (Greek and German), 2d ed., *Doxographi Graeci,* and *Poetarum philosophorum fragmenta.* Consult always Aristotle, *Metaphysics,* Bk. I.

English translations of fragments, etc.: Fairbanks, *First Philosophers of Greece;* Bakewell, *Source-Book of Ancient Philosophy.* See also Jackson, *Texts to Illustrate the History of Philosophy from Thales to Aristotle.*

2. Development of Pre-Sophistic Philosophy

Under this head we shall consider the Ionian "physicists," or nature-philosophers, the Pythagoreans, Heraclitus, the Eleatics, Empedocles, the Atomists, and Anaxagoras. The speculative impulse finds genuine expression in the Ionian physicists, who attempt to explain phenomena by natural causes and without appeal to mythical beings. They ask the question: What is the basal stuff of which the world is composed? and answer in terms of sense-perception: it is either water or air or a hypothetical undifferentiated mass. By means of a single principle (monism) they endeavor to account for the qualities of different bodies and their changes: these are transformations of the primal stuff. As observation shows, substances are changed into other substances (water, for example, becomes steam); hence the original element must have been similarly transmuted into the different substances found in our present

world of experience. The fact of change itself is explained by the view,—tacitly assumed by all the early Greek thinkers,—that reality is alive: the original substance bears within itself the cause of motion and change (hylozoism). The Pythagoreans fix their attention, not so much upon a sense-perceived substance, as upon the relations existing between things, the order, uniformity, or harmony in the world. Since this may be expressed in numbers, they make entities of numbers, conceiving them as the primary causes of things. Heraclitus resembles the Ionians in assuming an animated substance (fire) as the principle, but consciously singles out the fact of change, or becoming, as the significant thing: the world, according to him, is in constant change; everything is in a state of flux; there is no real permanence in things. He also brings out, more clearly than did his predecessors, the idea that there is a reason in the world controlling its happenings. The Eleatics, too, turn their attention to the notion of change, but reject it as absolutely inconceivable: it is unthinkable that an element, like fire, should ever become anything else; a thing cannot become something other than itself; whatever is, must remain what it is; permanence, not change, is the significant characteristic of reality. The problem thus created is taken up by Empedocles, who agrees with the Eleatics that absolute change is impossible, that nothing can become anything else, in the real sense of the term. Nothing can come from nothing; nothing can go into nothing; nothing can change into anything absolutely different. And still, so he holds with Heraclitus, things do change. The change, however, is only relative, not absolute. There are permanent elements or particles; these are combined to form bodies: this is origin; and the parts of the bodies are separated: this is decay. Nothing can really originate or change or disappear in the absolute sense; but the permanent, unchangeable elements of the world can and do change their relations to one another. The Atomists accept this new conception in principle, but differ from Empedocles in several respects: instead of assuming, as he did, four elements (earth, air, fire, water) and certain moving forces, personified as Love and Hate, they presuppose numberless minute indivisible particles of matter, called atoms, which are more elementary than earth, air, fire, water; and conceive motion as inherent

in the atoms themselves. Anaxagoras also subscribes to the principles of explanation offered by Empedocles and the Atomists, with this difference: he assumes countless elementary qualities and introduces the notion of a mind, outside of these elements, to explain the origin of their motion. The Sophists, finally, assume a negative attitude towards all these theories, declaring the attempts to solve the world-problem to be futile, on the ground that certain knowledge in this field is out of the question.

Special works: Burnet, *Early Greek Philosophy,* 2d ed.; Heidel, *Study of the Concept of Nature among Pre-Socratics;* Teichmüller, *Studien;* Byk, *Vorsokratische Philosophie;* Goebel, *Vorsokratische Philosophie;* Schultz, *Pythagoras und Heraklit.* Translations of fragments in Fairbanks, Burnet, and Bakewell. Bibliographies in Ueberweg-Heinze, *op. cit.,* Part I.

3. Problem of Substance

Thales

Thales was born in Miletus, a Greek colony, about 624 B.C., and died between 554 and 548 B.C. He was noted as a statesman, mathematician, and astronomer, and as the first philosopher of Greece. It is said that he predicted the eclipse which occurred May 28, 585. All the writers who give lists of the Seven Wise Men of Greece mention his name. Thales probably never wrote anything; at any rate we possess no work of his; the book *Nautical Astrology,* which has been ascribed to him, is spurious. Our knowledge of his teaching is, therefore, limited to secondary sources.

The importance of Thales lies in his having put the philosophical question squarely and in having answered it without reference to mythical beings. He declared water to be the original stuff, basing his inference, perhaps, on the observed fact that many elements essential to life (nourishment, heat, seed) contain moisture. Out of water everything comes; how, he does not tell us, most likely because the transformation of one substance into another was accepted by him as a fact of experience, and was not a problem for him at all. He evidently looked upon nature as alive, as moving, acting, changing, as did all the early Greek philosophers; so at least Aristotle tells us. If we may believe Hippolytus, all things not only come from water, according to Thales, but return to water. Perhaps he conceived it as a kind of slime, which would explain most satisfactorily both solids and liquids and the origin of living beings.

Anaximander was born in Miletus, 611 B.C., and died 547 or 546 B.C. He is mentioned as a pupil of Thales, and it is fair to presume that, as a fellow-townsman, he was acquainted with the latter's views. We hear that he was interested in astronomy, geography, and cosmology, that he made maps of the earth and of the heavens, and that he introduced the sun-dial into Greece. His treatise *On Nature,* of which only fragments remain, was the first philosophical book written in Greece and the first prose work in the Greek language.

Anaximander

Anaximander reasoned somewhat as follows: The essence or principle of things is not water, as Thales supposes,—for water itself must be explained,—but the infinite (τὸ ἄπειρον), an eternal imperishable substance out of which all things are made and to which all things return. By this he most likely meant a boundless space-filling animate mass, the nature of which he did not define specifically, because he regarded all qualities as derived from it. It is infinite, because, as he naïvely infers, otherwise it would be consumed in the creation of things.

From this great mass of undifferentiated matter different substances are parted off, in consequence of its eternal motion; first the hot and then the cold, the hot surrounding the cold as a sphere of flame. The heat of the flame turns the cold into moisture, and then into air, which expands and breaks up the sphere of fire into wheel-shaped rings. The rings have openings like the holes of a flute, through which the fire streams, and these are the heavenly bodies, which the air, surrounding them, forces to move around the earth. The sun is the highest body in the heavens, next comes the moon, and then the fixed stars and the planets. The earth is a cylindrical body in the center, formed by the drying-up of the original moisture, and the sea is what is left of the moisture.

Out of the moist element, as the sun evaporated it, the first living beings arose. In the course of time, some of these creatures came out of the water upon the drier parts of the land, and adapted themselves to their new surroundings. Man, like every other animal, was in the beginning a fish. Everything must return again to the primal mass whence it sprang, only to be produced anew *ad infinitum.* This is the doctrine of the alternation of worlds common to early thought. The creation of

things is injustice, in the sense that by becoming what they are they rob the infinite.

Anaximander's thinking represents an advance over that of Thales, first, in his attempt to explain as a derivative the element which Thales sets up as a principle, and, secondly, in his attempt to describe the stages of the process of becoming. He likewise seems to have some notion of the indestructibility of matter. His unwillingness to qualify the boundless mass shows a tendency towards a more abstract mode of thought than we find in his predecessor's concrete, sense-perceived substance. His original biological doctrines are mentioned as early examples of the theory of evolution, while his theory of the spheres plays an important part in the history of astronomy.

Anaximenes

Anaximenes (588-524 B.C.), another citizen of Miletus, is supposed to have been a pupil of Anaximander. He wrote a prose-work in the Ionic dialect, of which only a small fragment is left. According to him, the first principle of things, or underlying substance, is one and infinite, as his teacher had held, but it is not indeterminate: it is air, or vapor, or mist. As air or breath is the life-giving element in us, so it is the principle of the universe. As our own soul, which is air, holds us together, so breath (πνεῦμα) and air surround the whole world. This air is animate and extends infinitely through space.

From air all things arise by the processes of rarefaction and condensation (πύκνωσις): when it is rarefied, air becomes fire; when condensed, it becomes, in turn, wind, cloud, water, earth, and stone. All other things are composed of these. Changes are produced by motion, which is eternal.

Later followers of the Milesian school are: Hippo (fifth century B.C.), Idæus, and Diogenes of Apollonia (440-425 B.C.).

4. Problem of Number

The thinkers whom we have considered were interested in the problem of the essence of things: What, they asked, is the stuff of which the world is composed? They regarded it as a concrete, determinate substance, like water or air, or as something from which such elements are differentiated. We come now to a school

of philosophers who turned their attention particularly to the question of form or relation. As mathematicians they were interested in quantitative relations, which are measurable, and began to speculate upon the problem of the uniformity and regularity in the world, attempting to explain this fact by making an entity of number, and setting it up as the principle of all being.

Pythagoras and his School

The founder of the school (the Pythagoreans) was Pythagoras. Many fantastic stories are told of this man, particularly by writers coming centuries after his time. He is said to have traveled extensively and to have derived his ideas from the countries through which he passed, but these accounts are untrustworthy. He was born in Samos, between 580 and 570 B.C., and emigrated to the Greek colonies in Southern Italy, perhaps in the year 529. It is stated that his opposition to the tyranny of Polycrates and his loyalty to the aristocratic party caused him to leave his home. He settled in Crotona and founded an association, the purpose of which is described as ethical, religious, and political. His ideal was to develop, among his followers, the political virtues, to teach them to act for the good of the State, to subordinate themselves to the whole. In order to realize this end, he emphasized the need of moral training: the individual should learn to control himself, to subdue his passions, to harmonize his soul; he should have respect for authority, for the authority of his elders, his teachers, and the State. The Pythagorean brotherhood seems to have been a practical training-school for citizenship, in which the ideals of the master were put to the test. Its members cultivated the virtue of friendship, and practised the habit of self-examination with a view to improving their character. They formed a community, living together as a large family, taking their meals in common, wearing the same kind of dress, and applying themselves to the arts and crafts, as well as to the study of music, medicine, and, particularly, mathematics. It was customary for members to pass through a novitiate, the watchword being: first to hear, then to know. It is probable that the society was, originally, a form of the great popular religious revival which took place in Greece at this time, and which had as its aim the purification of life and the participation of the entire people in worship, particularly that form of it which expressed itself in the so-called mysteries. In the teachings of these mysteries, the future destiny of the soul was made dependent on man's conduct during his earthly life, and rules were laid down for the governance of his conduct. It is held that the Pythagorean society extended the usefulness of this religious movement, which was spreading among the lower classes, by adapting it to the needs of the more educated and aristocratic classes.

The political tendencies of the Pythagorean brotherhood brought it into conflict with the people of many cities in which it gained adherents, and ultimately provoked serious persecution. In consequence of

these disturbances, it is stated, Pythagoras was forced to seek refuge in Metapontum, where he died 500 B.C., while many of his followers were driven from Italy and found a home in Greece, among them Archytas of Tarentum (most likely a contemporary of Socrates) and Lysis, who escaped to Thebes. These misfortunes put an end to the Pythagorean brotherhood as an organized society, though disciples of the master continued to teach and develop his doctrines for hundreds of years.

Porphyry, *Life of Pythagoras;* Jamblichus, *Life of Pythagoras.* See Gomperz, *op. cit.,* vol. I; Zeller, vol. I.

Pythagoras himself left no writings, and we can ascribe to him only the ethical, political, and religious teachings which have been mentioned. It is likely, however, that he is the originator of the number-theory which forms the central idea in the doctrines of the school that bears his name and to which we now turn. The system, as it has come down to us, was worked out by Philolaus, in the second half of the fifth century B.C., and continued by other members of the school (Archytas, Lysis) into the fourth century.

Pythagorean Number-Theory

The Pythagoreans take note of the fact of form and relation in the world; they find measure, order, proportion, and uniform recurrence, which can be expressed in numbers. Without number, they reasoned, there can be no such relations and uniformities, no order, no law; hence number must lie at the basis of everything; numbers must be the true realities, the substances and grounds of things, and everything else an expression of numbers. They made entities of numbers, just as many persons to-day make entities of the laws of nature, speaking of them as though they were the causes of whatever happens. In their delight over the discovery that there is a numerical relation, for example, between the length of the string and the pitch of the tone, they called number, which is only a symbol or expression of the relation, the cause of the relation, and placed number behind phenomena as their basal principle and ground.

Now if number is the essence of things, then whatever is true of number will be true of things. The Pythagoreans, therefore, devoted themselves to the study of the countless peculiarities discoverable in numbers, and ascribed these to the universe at large. Numbers are odd and even; the odd cannot be divided by two, the even can; hence the former are limited, the latter unlimited. Hence the odd and the even, the finite and the infinite, the limited and unlimited, constitute the essence of reality. So, too, nature is a union of opposites, of the odd and

the even, the limited and unlimited. A table of ten such opposites is offered: limited and unlimited; odd and even; one and many; right and left; male and female; rest and motion; straight and crooked; light and darkness; good and bad; square and rectangle. Each of the numbers from one to ten has its peculiarity.

The corporeal world is also numerical, being based on the unit. The point is one, the line two, the figure three, the solid four. Again, earth is a cube; fire, a tetrahedron; air, an octohedron; water, an icosahedron; and so on. That is, the lines and surfaces of bodies were conceived as entities having an independent existence; for there can be no bodies without lines and surfaces, whereas lines and surfaces can be thought without bodies. The spatial forms are the causes of bodies, and since these forms can be expressed by numbers, the latter are the ultimate causes. The same reasoning was applied to non-corporeal things: love, friendship, justice, virtue, health, etc., are based on numbers; love and friendship being expressed by the number eight, because love and friendship are harmony, and the octave is harmony.

The Pythagorean school also gave its attention to the study of astronomy and furnished a number of noted astronomers. In the center of the universe, which forms a sphere, they placed the central fire; around it the planets revolve, turned by means of transparent moving spheres to which they are attached. The fixed stars are fastened to the highest arch of heaven, which revolves around the central fire in the course of 36,000 years; below this follow, in concentric spheres, Saturn, Jupiter, Mars, Mercury, Venus, the sun, moon, and earth. But since ten is the perfect number, there must be ten heavenly bodies; hence, the Pythagoreans place between the earth and the central fire a counter-earth, which screens the earth from the rays of the central fire. The earth and counter-earth daily revolve around the central fire in such a way that the earth always turns the same face to the counter-earth and the central fire, for which reason we, living on the other side of the earth, do not see the central fire. The sun, which encircles the central fire once in the course of the year, reflects the light of this body. The movement of the spheres represents an octave

Astronomy

and is, therefore, a harmony; since every sphere produces its own tones, the harmony of the spheres results.

Fantastic though these astronomical notions may seem, they paved the way for the construction of the heliocentric theory, which was offered in antiquity by Aristarchus of Samos, about 280 B.C. In the course of time, the counter-earth and central fire were given up; and Hicetas and Ecphantus taught the axial rotation of the earth. Heraclides found reason to reject the view that all the planets revolve around the earth in concentric spheres, and connected their movements with the movement of the sun. Aristarchus concluded from the larger size of the sun that it did not revolve around the earth and made the earth move round the sun. (See Gomperz, *op. cit.*, vol. I.)

5. Problem of Change

Permanence and Change

The Ionian physicists were interested in the substantial nature of things, the Pythagoreans in quantitative relations, order, harmony, number. The next problem to attract attention was the problem of change or becoming. The first philosophers spoke of the process of change, transformation, origin and decay, in a naïve objective way; it was not a problem for them at all. They did not stop to speculate about the notion of change, but made use of it, in their explanations, without reflection. They showed how everything emerged from their assumed primal unity and how everything returned to it, how, for example, air became clouds, clouds water, water earth, and how all these substances could be transformed back again into the original substratum. Implicit in all these theories of the transformation of substance was the thought that nothing could absolutely originate or be lost: it is the same principle that appears now as water, now as cloud, and now as earth. It was only natural that some thinker should emphasize the phenomenon of change, growth, origin and decay, and move it into the center of his system. This is what Heraclitus did. He is deeply impressed with the fact of change in the world, and concludes that change constitutes the very life of the universe, that nothing is really permanent, that permanence is an illusion, that though things may appear to remain

stable, they are actually in an endless process of becoming, in a constant state of flux. The Eleatics take the opposite view and deny the very possibility of change or becoming. To them it is unthinkable that reality should change, that a thing should really and truly become something else. And so they declared that change is illusory, mere sense-appearance, and that being is permanent and eternal.

Heraclitus (535-475 B.C.) was born in Ephesus, the son of a noble family. He remained an uncompromising aristocrat all his life, his contempt for the democracy being extreme. He was serious, critical, and pessimistic, independent in his opinion of men, dogmatic, proud, and inclined to find fault. He speaks disparagingly of Hesiod, Pythagoras, Xenophanes, and even of Homer, and prides himself on being self-taught. "Polymathy," he says, "does not train the mind; if it did, it would have made Hesiod and Pythagoras and Xenophanes wise." His style is obscure, possibly intentionally so, so that he came to be called the Obscure. Nevertheless, he was a forceful writer, full of wise and original sayings, and given to oracular utterances, which he made no attempt to support by proof. Only fragments of his work remain; it is supposed to have borne the customary title *On Nature* and to have been divided into three parts, physical, ethical, political. The *Letters* frequently ascribed to him are spurious.

Heraclitus

Patrick, *Heraclitus on Nature;* Bywater, *Fragments of Heraclitus;* Diels, *Heraklit* (Greek and German), 2d ed.; Schäfer, *Die Philosophie des Heraklit;* monographs by Bernays, Lasalle, E. Pfleiderer, Spengler, Bodrero.

The fundamental thought in the teaching of Heraclitus is, as we have already seen, that the universe is in a state of ceaseless change; "you could not step twice into the same rivers, for other and yet other waters are ever flowing on." It is to bring out this notion of incessant activity that he chooses as his first principle the most mobile substance he knows, something that never seems to come to rest, the ever-living fire (sometimes called by him vapor or breath), which is regarded by him as the vital principle in the organism and the essence of the soul. To some interpreters the fire-principle is merely a concrete physical expression for ceaseless activity, or process, not a substance, but the denial of substance, pure activity. Heraclitus, however, most likely, did not reason the thing out to so fine a point; it sufficed him to have

Union of Opposites

a principle that changes incessantly, undergoes continual qualitative transformation; and fire satisfied these demands.

Fire changes into water and then into earth, and the earth changes back again into water and fire, "for the way upward and the way downward are one." "All things are exchanged for fire, and fire for all things; as wares are exchanged for gold and gold for wares." Things seem to be permanent because we do not perceive the incessant movements in them, and because what they lose in one way they gain in another: the sun is new every day, kindled at its rising and quenched at its setting.

The primal unity is in constant motion and change, it never stands still. Its creation is destruction, its destruction creation. That is, as it passes into something else, from fire into water, the fire is lost in a new form of existence. Everything is thus changed into its opposite; everything, therefore, is a union of opposite qualities; nothing can persist in its qualities, there is no thing that has permanent qualities. In this sense, everything both is and is not; whatever can be predicated of its opposite may at the same time be predicated of *it*. And such opposition alone makes a world possible. Harmony in music, for example, results from the combination of high notes and low notes, *i.e.*, from a union of opposites.

In other words, the world is ruled by strife: "war is the father of all and the king of all." If it were not for strife or opposition, the world would pass away,—stagnate and die. "Even a potion dissolves into its ingredients when it is not stirred." The oppositions and contradictions are united, and harmony is the result; indeed, there could be no such order without contradiction, opposition, movement, or change. Ultimately, they will all be reconciled in the universal principle; the world will return to the original state of fire, which is also reason, and the process will begin anew. In this sense, good and bad are the same; "life and death, waking and sleeping, and youth and old age, are the same; for the latter change and are the former, and the former change back to the latter." For God all things are fair and good and just, for God orders things as they ought to be, perfects all things in the harmony of the whole, but men suppose some are unjust and others just.

The cosmic process, therefore, is not haphazard or arbitrary,

but in accordance with " fixed measure "; or, as we should say to-day, governed by law. " This one order of things neither any one of the gods nor of men has made, but it always was, is, and ever shall be, an ever-living fire, kindling according to fixed measure and extinguished according to fixed measure." Heraclitus sometimes speaks of it as the work of Fate or Justice, expressing in this way the idea of necessity. In the midst of all change and contradiction, the only thing that persists or remains the same, is this law that underlies all movement and change and opposition; it is the reason in things, the *logos*. The first principle is, therefore, a rational principle; it is alive and endowed with reason. " This alone is wise," says our philosopher, " to understand the intelligence by which all things are steered through all things." Whether he conceived it as conscious intelligence, we cannot say with absolute certainty, but it is fair to presume that he did.

Law of Reason

On this theory of the universe, Heraclitus bases his psychology and ethics. Man's soul is a part of the universal fire and nourished by it. We breathe it, and receive it through our senses. The driest and warmest soul is the best soul, most like the cosmic fire-soul. Sense-knowledge is inferior to reason; the eyes and ears are bad witnesses. That is, perception without reflection does not reveal to us the hidden truth, which can be found only by reason.

Psychology and Ethics

The controlling element in man is the soul, which is akin to divine reason. He must subordinate himself to the universal reason, to the law that pervades all things. " It is necessary for those who speak with intelligence to hold fast to the universal element in all things, as a city holds fast to the law, and much more strongly. For all human laws are nourished by one which is divine." To be ethical is to live a rational life, to obey the dictates of reason, which is the same for us all, the same for the whole world. Yet, " though reason is common, most people live as though they had an understanding peculiar to themselves." Morality means respect for law, self-discipline, control of passions; it is to govern oneself by rational principles. " The people ought to fight for their law as for a wall."

"Character is a man's guardian divinity." "Wantonness must be quenched more than a conflagration." "It is hard to contend with passion; for whatever it desires to get it buys at the cost of the soul." "To me one man is ten thousand if he be the best."

Heraclitus had a low opinion of the masses who "follow the bards and employ the crowd as their teacher, not knowing that many are bad and few good," and "eat their fill like cattle." Life is a sorry game at best: "lifetime is a child playing at draughts; the kingdom is a child's." "Man, like a light in the night, is kindled and put out." For the popular religion, too, he had nothing but contempt: "They purify themselves with blood, as if one who had stepped into the mud were to wash it off with mud. If any one of men should observe him doing so, he would think he was insane. And to these images they pray, just as if one were to converse with men's houses, for they know not what gods and heroes are." *

School of Elea

Heraclitus is impressed with the phenomenon of change and motion; the Eleatics insist that change and motion are unthinkable, that the principle of things must be permanent, unmoved, and never-changing. The school takes its name from the town of Elea, in Southern Italy, the home of its real founder Parmenides. We distinguish three phases in this philosophy: (1) Xenophanes, who may be regarded as the originator, presents its fundamental thought in theological form. (2) Parmenides develops it as an ontology and completes the system. (3) Zeno and Melissus are the defenders of the doctrine: they are the dialecticians of the school. The former attempts to prove the Eleatic theses by showing the absurdity of their opposites, while the latter offers positive proofs in support of the theories.

Freudenthal, *Über die Theologie des Xenophanes;* Diels, *Parmenides.* See bibliography in Ueberweg-Heinze, §§ 18-21.

Xenophanes (570-480 B.C.) emigrated from Colophon, in Asia Minor, to Southern Italy, and as a rhapsodist wandered from place to place, reciting his ethical-religious poems. Only a few fragments of his works are extant. He is a speculative theo-

* Translations by Fairbanks, *First Philosophers of Greece.*

logian rather than a philosopher. Like Pythagoras, he came under the influence of the popular religious movement of the sixth century. He attacks the prevailing polytheism with its anthropomorphism, and proclaims the unity and unchangeableness of God. "But mortals think that the gods are born as they are, and have perceptions like theirs, and voice and form." "Yes, and if oxen or lions had hands, and could paint with their hands and produce works of art as men do, horses would paint the forms of the gods like horses and oxen like oxen. Each would represent them with bodies according to the form of each." "So the Ethiopians make their gods black and snub-nosed; the Thracians give theirs red hair and blue eyes."* God is one, unlike mortals in body or in mind; without toil he governs all things by the thought of his mind. He abides in one place and does not move at all; he sees all over, thinks all over, and hears all over, that is, in all his parts. God is one; he is without beginning, or eternal. He is unlimited in the sense that there is nothing beside him, but limited in the sense that he is not a formless infinite, but a sphere, a perfect form. He is immovable as a whole,—for motion is inconsistent with the unity of being,—but there is motion or change in his parts.

Theology

Xenophanes is a pantheist, conceiving God as the eternal principle of the universe in which everything is, as the One and All (ἕν καὶ πᾶν): God, in other words, is the world; he is not a pure spirit, but the whole of animated nature, as the early Greeks always conceived nature (hylozoism). If he believed in the gods of polytheism at all, he regarded them as parts of the world, as natural phenomena.

Xenophanes also offered natural-scientific theories. From the evidence of shells and imprints of sea-products in stones, he infers that we ourselves, and all things that come into being and grow, arose from earth and water. Once the earth was mingled with the sea, but it became freed from moisture in the course of time. It will sink back again into the sea and become mud, and the race will begin anew from the beginning. The sun and the stars he regards as fiery clouds, which are extinguished and rekindled daily.

* Translations by Burnet, *Early Greek Philosophy.*

The world-view suggested by Xenophanes was developed and completed by Parmenides, the metaphysician of the school, who was born about 515 B.C., the son of a wealthy Elean family. He was acquainted with the teachings of Heraclitus, and had probably been a Pythagorean. His didactic poem *On Nature,* fragments of which have been preserved, is divided into two parts: concerning truth and concerning opinions.

Heraclitus taught that everything changes, that fire becomes water, and water earth, and earth fire, that things are and then are not. But how is this possible? asks Parmenides; how can a thing both be and not be? How can any one think such a contradiction; how can a thing change its qualities, how can one quality become another quality? To say that it can, is to say that something is and something is not, that something can come from nothing, and that something can become nothing. Or, to employ another line of argument: If being has *become,* it must either have come from not-being or from being. If from not-being, it has come from nothing, which is impossible; if from being, then it has come from itself, which is equivalent to saying that it is identical with itself or always was.

Ontology

It is evident, then, that from being, only being can come, that no thing can become anything else, that whatever is always has been and always will be, or remains what it is. Hence, there can be only one eternal, underived, unchangeable being. Since it is all alike and there cannot be anything in it but being, it must be continuous. Further, it must be immovable, for being cannot come into being or pass away, and there is no non-being (space) for it to move in. Again, being and thought are one, for what cannot be thought, cannot be; and what cannot be, or non-being, cannot be thought. That is, thought and being are identical: whatever is thought, has being. Being and thought are also one in the sense that reality is endowed with mind.

Being or reality is a homogeneous, continuous, indeterminate mass,—which the æsthetic imagination of our philosopher pictures as a sphere,—endowed with reason, eternal and immutable. All change is inconceivable, and, therefore, the world of sense is an illusion. To regard as true what we perceive by the senses, is to identify being with non-being. Parmenides shows a firm

belief in reason: what is contradictory to thought cannot be real.

Besides the doctrine called the truth, Parmenides offers a theory, based on sense-perception, according to which there are both being and non-being, and hence motion and change. The world is the result of the mingling of two principles, the warm and light element and the cold and dark element. Organic beings arose from slime. The thought of man depends on the mixture of the elements in his body, the warm element perceiving the warmth and light in the world; the other, its opposite.

Parmenides shows us in his " true " teaching that logical thought compels us to conceive the world as a unity, as unchangeable and immovable. Sense-perception, on the other hand, reveals to us a world of plurality and change: this is the world of appearance and opinion. How it is possible for such a world to exist, or how it is possible to perceive such a world, he does not tell us.

Zeno (about 490-430), a statesman of Elea and a pupil of Parmenides, attempts to prove the Eleatic doctrine by pointing out the absurdity of its opposite. His idea is that, if we assume plurality and motion, we involve ourselves in contradictions. Such notions are self-contradictory, hence it is impossible to accept them. Thus, if there are many things, these must be both infinitely small and infinitely great; infinitely small, because we can divide them into infinitely small parts, which will never give us magnitude; infinitely great, because we can add an infinite number of parts to every part. It is absurd to say that multiplicity is both infinitely small and infinitely great, hence we must reject it. Motion and space are impossible for similar reasons. If we say that all being is in space, we must assume that this space is in a space, and so on *ad infinitum*. Similarly, let us assume that a body is moving through space. In order to pass through a certain space, it must first have moved through half of that space; in order to have passed through this half, it must first have gone through half of this half, and so on *ad infinitum*. In

Dialectics

short, the body can really never get anywhere; and motion is impossible.

Melissus of Samos, a successful admiral, attempts a positive proof of the Eleatic doctrine. Being cannot have originated, for that would mean that there was non-being before there was being; and from non-being being cannot come. Being is also one, for if there were more beings than one, being would not be unlimited. There is no empty space or non-being, hence motion is impossible. If there is neither multiplicity nor motion, there can be neither separation nor combination, and no change. Hence, the senses deceive us in presenting motion and change.

6. Explanation of Change

Solution of the Riddle

The old nature-philosophers had all implicitly assumed that nothing can arise or disappear, that absolute creation or destruction is impossible. They did not, however, bring this thought to consciousness; they accepted it without criticism; it was implicit rather than explicit in their minds. The Eleatic thinkers become fully conscious of the axiom; they do not merely tacitly presuppose it in their reasonings, but deliberately assert it as an absolute principle of thought and rigorously apply it. Nothing can arise or disappear, and nothing can *change* into anything else; no quality can become another quality, for that would mean the disappearance of a quality on the one hand, and the creation of a quality on the other. Reality is permanent and unchangeable, change a fiction of the senses.

Still, things *seem* to persist, and things *seem* to change. How is it possible for things to persist and yet to change? How is this deadlock in thought to be removed? Philosophy could not leave the matter thus; the riddle of permanence and change had to be solved, the static and the dynamic views of the world had to be reconciled in some way; and this the successors of Heraclitus and Parmenides proceeded to do.

Absolute change, they say, is impossible; so far the Eleatics are right. It is impossible for a thing to come from nothing, to become nothing, and to change absolutely. And yet we have the right to speak of origin and decay, growth and change,

in a *relative* sense. There are *beings* or particles of reality that are permanent, original, imperishable, underived, and these cannot change into anything else: they are what they are and must remain so, just as the Eleatic school maintains. These beings, or particles of reality, however, can be combined and separated, that is, form bodies that can again be resolved into their elements. The original bits of reality cannot be created or destroyed or change their nature, but they can change their relations in respect to each other. And this is what we mean by change. In other words, absolute change is impossible, but relative change is possible. Origin means combination, decay separation of elements: change is a change in their relations.

Empedocles, the Atomists, and Anaxagoras give the same general answer to the problem proposed by Heraclitus and Parmenides. They agree that absolute change is impossible, but that there is relative change. They differ, however, in their answers to the following questions: (1) What is the nature of the particles of reality of which the world is composed? (2) What causes these particles to combine and separate? According to Empedocles and Anaxagoras, the elements have definite qualities; according to the Atomists, they are without quality. According to Empedocles, there are four qualitative elements: earth, air, fire, water; according to Anaxagoras, there are countless numbers of such elements. According to Empedocles, two mythical beings, Love and Hate, cause the elements to unite and divide; according to Anaxagoras, it is a mind outside of the elements that initiates motion; according to the Atomists, motion is inherent in the elements themselves.

Empedocles was born in Agrigentum, Sicily, 495 B.C., the son of a wealthy and public-spirited family. He was for a long time the leader of the democracy of his native city, and it is said of him that he declined the kingship. He died, probably as an exile, in the Peloponnesus, 435 B.C. The story that he committed suicide by leaping into the crater of Mt. Ætna is legendary. Empedocles was not only a statesman and orator, but a religious teacher, physician, poet, and philosopher. Many stories are told of the miracles he worked, and it is not unlikely that he himself believed in his powers of magic. We possess fragments of two poems, the one cosmological, *On Nature,* the other religious, bearing the title *Purifications.* (Translation in verse by Leonard, 1908.)

Empedocles

According to Empedocles, there is neither origin nor decay in the strict sense, but only mingling and separation. "For it cannot be that aught can arise from what in no way is, and it is impossible and unheard of that what *is* should perish; for it always will *be*, wherever one may keep putting it."* There are four elements, or "roots of things," each having its specific nature, earth, air, fire, water; they are underived, unchangeable, and indestructible, and fill the all. Bodies are formed by the coming together of these elements, and destroyed by their disunion. The influence of one body on another is explained as the passing of effusions from the one into the pores of the other, into which they fit.

But what causes the elements to unite and divide? Empedocles explains this by assuming two mythical beings, Love and Strife, or Hate.† These two forces,—attraction and repulsion, we should call them,—always act together, causing bodies to be formed and bodies to be destroyed. Originally, however, all the elements were mingled together in the form of a sphere,—a blessed god, in whom Love reigned supreme. But gradually Strife gained the upper hand, and the elements were scattered, each existing for itself alone, there being no bodies of any kind. Then Love entered the chaos and produced a whirling motion, causing particles to unite, like with like. In consequence, air or ether first separated off, forming the arch of the heavens; fire came next, forming the sphere of stars beneath; water was pressed from the earth by rotating motion, and seas were formed; and the evaporation of the water by the fire of heaven produced the lower atmosphere. This process of union will continue until all the elements shall be combined again into a blessed sphere, by the action of Love, and then the process of disintegration will begin anew, and so on, in periodic change.

Organic life arose from the earth; first plants, then different parts of animals, arms and eyes and heads. These parts were combined, haphazard, producing all kinds of shapeless lumps and monsters,—creatures with double faces, offspring of oxen

* Translation by Burnet.

† The elements, being animated, also seem to have the power to move themselves. There is a tendency of like to like.

with human faces, children of men with oxen's heads,—which separated again, until, after many trials, such forms were produced as were fit to live; and these are perpetuated by generation.

Man is composed of the four elements, which accounts for his ability to know each of them: like is known by like; it is by earth that we see earth; and by water, water; and by air, glorious air; and so on. Sense-perception is explained as the result of the action of bodies on the sense-organs. Thus, in vision, particles (of fire and water) pass from the object seen to the eye, where they are met by similar particles passing through the pores of the eye, through the attraction of the particles from without. By the contact of these bodies, near the surface of the eye, images are produced. Only such particles, however, affect the eye as fit into the pores of the eye. In hearing, air rushes into the ear and there produces sound; in taste and smell, particles enter the nose and mouth. The heart is the seat of intelligence.

Empedocles, in the hylozoistic fashion of the early Greek philosophers of nature, ascribes psychic life to all things: "All things have power of thought." In his religious work he teaches the fall of man and the transmigration of souls, doctrines which seem to connect him with the great Orphic sect that influenced all Hellas.

Anaxagoras (500-428 B.C.), of Clazomenæ, in Asia Minor, took up his abode at Athens and became the friend of the great statesman Pericles, who aimed to make his city the intellectual as well as political center of Hellas. Owing to the charge of atheism, brought against him by the enemies of his patron, he left Athens after a residence of thirty years (464-434), and settled at Lampsacus, where he died. He was a noted mathematician and astronomer, as well as philosopher. We have important fragments of his work *On Nature,* which was written in clear and simple prose.

Anaxagoras

Breier, *Die Philosophie des Anaxagoras;* Heinze, *Über den νοῦς des Anaxagoras.*

The problem for Anaxagoras, as for Empedocles, was to explain the phenomenon of change or becoming. He accepted the Eleatic notion that absolute change is impossible, that no quality can become another quality, that reality must be permanent and unchangeable in its fundamental essence: "Nothing

comes into being or passes away." But he did not deny the fact of change: there is relative change; things do come into existence and pass away, in the sense, namely, of mixture and separation of elements. The elements, however, must be more than four; a world so rich and full of qualities as ours cannot be explained by so few. Besides, earth, air, fire, and water are not elements at all; they are mixtures of other substances. Anaxagoras, therefore, assumed, as his utimates, an infinite number of substances of specific quality, " having all sorts of forms and colors and tastes," particles of flesh, hair, blood, bone, silver, gold, and so on. Such infinitely small, but not indivisible, corpuscles are uncaused and changeless, for " how could flesh come from that which is not flesh? " Their quantity as well as their quality is constant, nothing can be added or taken away. He was led to this view by reflections of this sort: The body is made up of skin, bones, blood, flesh, etc., differing in lightness and darkness, in heat and cold, softness and hardness, and so on. The body is nourished by food, hence food must contain portions of such substances as build up the body. But since food draws its ingredients from earth, water, air, and the sun, the latter must furnish the substances composing food. Hence, the so-called simple elements of Empedocles are in reality the most complex things of all; they are veritable reservoirs of infinitely small particles of matter of all kinds: they must contain all the substances to be found in the organic body, otherwise how could we account for the presence of skin, bone, and blood in the body?

Originally, before the formation of worlds, infinitely small particles of matter, which our philosopher called germs or seeds (spermata) and Aristotle homogeneous parts or *homoiomere* (and which we might call molecules), were all mingled together in a confused mass, filling the entire universe, and not separated from one another by empty spaces. The original mass is a mixture of an infinite number of infinitely small seeds. The world, as it exists now, is the result of the mingling and separation of the particles composing this mass. But, we inquire, how were the seeds separated from the chaos in which they lay scattered, and united into a cosmos or world-order? By mechanical means, or motion, by change of place. What, however, caused them

to move? They are not endowed with life, as the hylozoists hold, nor are they moved by Love and Hate. Anaxagoras finds the clue to his answer in the rotation of the heavenly bodies observed by us. A rapid and forcible whirling motion was produced at a certain point in the mass, and separated the germs; this motion extended farther and farther, bringing like particles together, and will continue to extend until the original chaotic mixture is completely disentangled. The first rotation caused the separation of the dense from the rare, the warm from the cold, the bright from the dark, the dry from the moist. "The dense, the moist, the cold, the dark, collected where the earth now is; the rare, the warm, the dry, the bright, departed toward the farther part of the ether." The process of separation continued and led to the formation of the heavenly bodies, which are solid masses hurled from the earth by the force of the rotation, and to the formation of different bodies on the earth. The heat of the sun gradually dried up the moist earth; and from the seeds filling the air, and deposited in the earth-slime by the falling rain, organic bodies arose, which Anaxagoras endowed with souls in order to explain their movements.

We see, the entire complex world-process, as it now appears, is the result of a long series of movements, which followed necessarily from the original rotation. And what caused that? To account for the initial motion, Anaxagoras has recourse to an intelligent principle, a mind or nous (νοῦς), a world-ordering spirit, which he conceives as an absolutely simple and homogeneous substance,—not mixed with other elements or seeds, but absolutely separate and distinct from them,—that has power over matter. It is a spontaneous active being, the free source of all movement and life in the world: it knows all things, past, present, and future, it arranges all things and is the cause of all things; it rules over all that has life, both greater and less.

There is disagreement among interpreters as to whether Anaxagoras meant by his mind pure spirit or an exceedingly fine matter, or something not entirely material and not entirely immaterial. Although he sometimes expresses himself awkwardly on this point, calling mind the most rarefied of all things, it is to all intents and purposes a distinct principle, distinct in the sense that it never mingles with anything else. We may de-

scribe his standpoint as a vague dualism, as a dualism not yet sharply defined. Mind initiated the world-process, but it also seems to be present in the world, in organic forms, even in minerals, wherever it is needed to account for movements not otherwise explainable. It is in the surrounding mass, in the things that were separated, and in things that are being separated. That is, to use modern terms, it is both transcendent and immanent; theism and pantheism are not sharply separated in the system. Aristotle is right in his criticism: "Anaxagoras uses mind as a device by which to construct the universe, and when he is at a loss for the cause why anything necessarily is, then he drags it in, but in other cases he assigns any other cause rather than mind for what comes into being."* The fact is, the philosopher endeavored to explain everything by mechanical principles, and had recourse to mind as the intelligent cause of motion, only as a last resort.

Empedocles and Anaxagoras paved the way for the natural-scientific view of the universe which, under the name of the atomic theory, has remained the most influential theory in science to this day. Their teachings, however, needed revision in several important respects, and this they received at the hands of the Atomists. The Atomists agree with their predecessors in the acceptance of original and changeless particles of reality, but they deny to them the qualities ascribed to them either by Empedocles or Anaxagoras, and reject the view that they are moved from without by gods or a mind. Earth, air, fire, and water are not the "roots of all things," nor are there numberless "seeds" of different qualities. Such things are not real elements, but are themselves composed of simpler units, invisible, impenetrable, indivisible spatial entities (atoms), differing only in form, weight, and size; and these units or atoms have an inherent motion of their own.

Atomists

The founders of the School of Atomists are Leucippus and Democritus. Of Leucippus we know almost nothing; his very existence has been doubted by some, while others, with Aristotle, regard him as the real originator of the atomic system.† The latter view is, most likely, the correct one. He is said to have come from Miletus, to have studied

* Translations by Fairbanks.

† Cf. Burnet, *Early Greek Philosophy*.

under Zeno at Elea, and to have established the school at Abdera, which his pupil Democritus made famous. His writings, which were few, were, so it is reported, incorporated in the works of his disciple.

Democritus was born, about 460 B.C., in the commercial city of Abdera, situated on the coast of Thrace, and died 370. He traveled extensively, wrote many books, on physics, metaphysics, ethics, and history, and took high rank as a mathematician.

Comparatively few fragments of his writings have come down to us, and we cannot always decide with certainty what belongs to him and what to Leucippus. We may, however, with the help of the materials at hand, form a notion of the atomic theory, even though the question of its authorship be left in doubt.

Brieger, *Die Urbewegung der Atome;* Lortzing, *Die ethischen Fragmente des Demokrit;* Natorp, *Die Ethika des Demokritos;* Dryoff, *Demokrit-Studien.*

The Atomists agree with the Eleatics that absolute change is impossible; reality is, in its essence, permanent, indestructible, unchangeable. At the same time, it cannot be denied that change is going on, that things are in constant motion. Now, motion and change would be unthinkable without empty space, or the void, without what Parmenides had called non-being. Hence, the Atomists insist, non-being, or empty space, exists; space is not real in the sense of being corporeal, but it exists: *what is* (bodies), is no more real than *what is not* (space). A thing can be real without being a body. Being, or the full, and non-being, or the void, both exist. That is, the real is not one continuous, undivided, immovable being, as the Eleatics held, but a plurality of beings,—an infinite number of beings, separated from one another by empty spaces.

Each of these beings is indivisible (ἄτομον), impenetrable, and simple, an atom. The atom is not a mathematical point, or a center of force, as some moderns conceive it, but has extension; it is not mathematically indivisible, but physically indivisible, *i.e.*, it has no empty spaces in it. All atoms are alike in quality; they are neither earth, air, fire, or water, nor are they germs of specific kinds. They are simply very small, compact, physical units, differing in shape, size, and weight, arrangement and position. They are underived, indestructible, unchangeable. What they are, they have always been and ever shall be. In other words, atoms are the one indivisible Being of Parmenides broken up into small bits that cannot be further divided, and separated from each other by empty spaces.

Out of these atoms, as building stones of reality, and empty spaces, the different objects are formed, as comedies and tragedies are composed of the same letters of the alphabet. All bodies are combinations of atoms and spaces; origin means union; destruction, separation. Bodies differ because the atoms constituting them differ in the ways already mentioned. They act on one another by direct contact only, through pressure and impact, or by means of emanations moving from one body and striking the other, action in the distance being impossible. What causes atoms to unite and separate is the motion inherent in them. "Nothing happens without a ground, but everything for a reason and necessarily." The motion is uncaused, like the atoms themselves; they have never been at rest, but have been in motion from the very beginning. Owing to the many different shapes of atoms, some having hooks, others eyes, or grooves, or humps, or depressions, they interlace and hook together.

The evolution of worlds is explained as follows. Atoms are heavy and fall downward, but the larger ones fall faster, thus forcing the lighter upward. This action causes a whirling motion, which extends farther and farther, in consequence of which atoms of the same size and weight collect, the heavier ones at the center, forming air, then water, then solid earth; the lighter ones at the periphery, forming the heavenly fires and the ether. Multitudes of worlds are produced in this way, each system having a center and forming a sphere; some having neither sun nor moon, some with larger planets or a greater number of them.

The earth is one of the bodies thus created. From the moist earth, or slime, life arose. Fiery atoms are distributed over the entire organism, which accounts for the heat of these bodies. They are especially abundant in the human soul. The soul is composed of the finest, roundest, most nimble, and fiery atoms, which are scattered over the entire body,—there being always one soul atom between two other atoms,—and which produce the movements of the body. Certain organs of the body are the seat of particular mental functions: the brain, of thought; the heart, of anger; the liver, of desire. The resistance of every object, whether alive or not, to the pressure of surrounding forces is explained by the presence in it of such a soul. We inhale and exhale soul-atoms; and life exists so long as this process

continues. At death, the soul-atoms are scattered; when the vessel of the soul is shattered, the soul spills out. We have here the crude beginnings of a physiological psychology on a materialistic basis.

Sense-perception is explained as a change produced in the soul by the action of emanations, or images, or idols (εἴδωλα), resembling the perceived body. These images fly off from the body and give their shape to the intervening air; that is, they modify the arrangement of the particles next to the object, which gives rise to a modification in those immediately adjoining it, and so on, until emanations coming from the sense-organs are reached. The like perceives the like, that is, perception is possible only when the images passing from a body are like those emanating from the sense-organ. This theory of perception resembles, in principle, the undulatory and ether theories of modern science.

By means of such images, which pass from objects everywhere, Democritus explains dreams, prophetic visions, and the belief in gods. Gods exist, but they are mortal like men, though longer-lived. There is a world-soul, which is composed of finer atoms than the souls of men.

The sensible qualities (color, sound, taste, smell, etc.) which we attribute to the different bodies are not in the things themselves, but merely effects of combinations of atoms on our sense-organs. Atoms, as such, have no qualities other than those we have already mentioned, impenetrability, shape, and size. Hence, sense-perception does not yield us a true knowledge of things; it tells us merely how these affect *us*. (We have here the distinction between primary and secondary qualities, which is made in modern philosophy.) We cannot *see* atoms as they are; we can, however, *think* them. Sense-perception is obscure knowledge; thought, which transcends our sense-perceptions and appearances, and reaches the atom, is the only genuine knowledge. Democritus is a rationalist, as, indeed, all the early Greek philosophers are. But thought is not, therefore, independent of sense-perception; indeed, " the genuine way of knowing, which has a finer organ of thought," begins when sense-experience can carry us no farther, " when the investigation must be carried farther into that which is still finer " than the limits placed

against our sense-knowledge. Besides, it must be remembered that soul (ψυχή) and reason (νοῦς) are the same thing for Democritus.

In the ethical fragments ascribed to Democritus, we can trace the outlines of a refined hedonistic ethics. The true end of life is happiness, which he describes as an inner state of satisfaction or pleasure, depending on the tranquillity, harmony, and fearlessness of the soul. This does not depend on material goods, not on wealth or the pleasures of the body,—for these are short and productive of pains, and require repetition;—but on moderation in pleasure and symmetry of life. The less we desire, the less apt we are to be disappointed. The best way to seek the goal is to exercise the mental powers,—by reflection and the contemplation of beautiful acts.

All virtues are valuable in so far as they realize the highest good, happiness; chief among them are justice and benevolence. Envy, jealousy, and bitterness of mind create discord and harm everybody. We should, however, do right, not from fear of punishment, but from a sense of duty. To be good, one must not merely refrain from doing wrong, but not even desire it. "You can tell the man who rings true from the man who rings false, not by his deeds alone, but also by his desires." "The right-minded man, ever inclined to righteous and lawful deeds, is joyous day and night, and strong, and free from care." We ought to serve the State because "a well-administered State is our greatest safeguard." "When the State is in a healthy condition, all things prosper; when it is corrupt, all things go to ruin."*

PROBLEMS OF KNOWLEDGE AND CONDUCT

7. Age of the Sophists

Philosophy had made great progress since the days of the theogonies and cosmogonies. The old conceptions of the world and of life had been profoundly transformed under the influence of philosophy; to what extent, the contrast between the naïve theory of a universe full of gods and occult mythical

* Translations taken from Bakewell, *Source-Book*.

forms and the machine-theory of the Atomists plainly shows. The spirit of free inquiry, however, was not confined to the philosophers' schools, but, as was inevitable, permeated other fields of thought; there, too, new conceptions were gradually displacing the old. We may note the change in the dramatic poetry of the Greeks: in Æschylus (525-456 B.C.), Sophocles (496-405), and Euripides (480-406); their views of life and religion are deepened and broadened by criticism and reflection. We see it in the writings of the historians and the geographers: the old legendary tales and superstitions, which had formerly found such ready acceptance, are discredited, and Herodotus (born 480) paves the way for a critical study of history, of which Thucydides (born 471) is the finest classical representative. In medicine, the old fantastic ideas and practices are abandoned by the leaders of the craft; the need of a knowledge of nature and of man is felt, and the physical theories of the philosophers, many of whom were themselves physicians, are applied in the art of healing. The name of Hippocrates (born 460) stands out as a landmark of the progress made by Greece in the direction of a scientific study of medicine. The investigations of the physicians came to be of great value to students of philosophy, in showing the importance of observation and experience.*

Progress of Thought

We now reach a period in the history of Greek philosophy in which the construction of great systems of thought comes to a temporary stop. Some thinkers simply continue and develop the teachings of the existing schools, others seek to combine the doctrines of the earlier philosophers with those of later masters in eclectic fashion; some turn their attention to the natural-scientific investigations which were being pursued by the schools of medicine, others are interested in the study of the mental disciplines forming the basis of morals, law, and politics. As Gomperz points out, the zeal for investigation was intense and extended to all sorts of problems, including questions concerning the origin and purpose of the State, the principles of conduct, religion, art, and education. Specialistic manuals were being produced in abundance. Every form of human activity, from the cooking of food to the creation of

* Cf. Gomperz, *The Greek Thinkers*, vol. I; Moon, *Relation of Medicine to Philosophy*.

works of art, from taking a walk to carrying on war, was formulated into rules and, if possible, reduced to principles. Philosophy was leavening the lump. The spirit of independent reflection and criticism, so characteristic of the beginnings of philosophy in Greece, had invaded every field of study, and was preparing the way for another and greater era of speculative thought. But the human mind had to follow many false paths and lose itself in many blind alleys before the culmination was reached. We shall attempt to describe the fortunes of philosophy during the second half of the fifth century B.C., a century of great significance for the history of Greece and civilization in general.

Greek Enlightenment

We have observed in the political, moral, religious, and philosophical development of the Hellenic people a growing tendency toward freedom and individualism. The critical attitude toward life and human institutions had already made itself felt in their early poetry, faintly in Homer, with increasing force in Hesiod and the poets of the seventh and sixth centuries B.C. These men meditated upon the manners and customs of their times, upon the social and political institutions, upon the religious ideas and practices, upon the origin, nature, and behavior of the gods. They developed a purer conception of deity, and, in their theogonies and cosmogonies, prepared the way for the coming of philosophy. In the philosophies of the sixth century, the tendency to independent thinking appears almost full-fledged. During this century and the first half of the fifth, natural science and nature-philosophy are the order of the day; the inquiring mind turns outward to the world of physical things. The effort is made to understand the meaning of the cosmos; system after system is offered to solve the riddle of the universe; the object of chief interest is the world and its ways, man's place in nature being determined by the conclusions reached in metaphysics.

The political, economic, and intellectual experiences of the Greek people during the fifth century were highly favorable to the development of the spirit of enlightenment which characterized their philosophers. The Persian wars (500-449 B.C.) had left Athens the mistress of the sea and a world-power, as well as the commercial, intellectual, and artistic center of Greece.

Poets, artists, teachers, and philosophers now entered her gates and helped to entertain and instruct her wealthy citizens; magnificent buildings and statues adorned the city, and the theaters rang with the plaudits of a self-satisfied people. When we call to mind the illustrious men who dwelt within the city-walls, during the second half of the fifth century,—Pericles, Anaxagoras, Thucydides, Phidias, Sophocles, Euripides, Aristophanes, Hippocrates, Socrates,—we can well understand the proud words in the great funeral oration delivered by Pericles that Athens was the school for Greece.

The great economic changes and the establishment of democratic institutions, resulting from the new order of things, gave a further impetus to independent thought and action, and with these there came the desire for power and the things that bring power: wealth, fame, culture, efficiency, and success. The traditional views of religion, morality, politics, philosophy, science, and art were subjected to criticism; the old foundations were examined and in many cases torn up; the spirit that denies was abroad in the land. The demand for instruction in the new subjects of study grew strong; public life offered a splendid field for men skilled in persuading and convincing the people, and preparation in the arts of rhetoric, oratory, and dialectics became a practical necessity.

The age we have been describing was an age of enlightenment (*Aufklärung*). The attitude of mind engendered could not fail to encourage the growth of individualism. The individual began to cut loose from the authority of the group, to strike out for himself, to think his own thoughts and to work out his own salvation, independently of the old traditions. This critical habit of thought, which was good enough in its way, assumed an exaggerated form in some quarters and culminated in mere quibbling and hair-splitting; in others, it tended to degenerate into intellectual and practical subjectivism: what I happen to think is true, *is* true; what I happen to believe is right, *is* right. One man's opinion is as good as another's; one man's way of acting is as good as another's. It is not surprising, under the circumstances, that *no* man's opinion should have been esteemed very highly, that skepticism should have flourished in the theoretical sphere, and that the gospel of self-interest should have been

preached in the field of practice. An often quoted passage from Thucydides, though perhaps an exaggeration, throws some light upon a degenerate phase of the new movement: "The common meaning of words was turned about at men's pleasure; the most reckless bravo was deemed the most desirable friend; a man of prudence and moderation was styled a coward; a man who listened to reason was a good-for-nothing simpleton. People were trusted exactly in proportion to their violence and unscrupulousness, and no one was so popular as the successful conspirator, except perhaps one who had been clever enough to outwit him at his own trade, but any one who honestly attempted to remove the causes of such treacheries was considered a traitor to his party. As for oaths, no one imagined they were to be kept a moment longer than occasion required; it was in fact an added pleasure to destroy your enemy if you had managed to catch him through his trusting to your word."* Aristophanes, in his comedies, also shows us the seamy side of the new civilization. According to him, says Benn, "the ancient discipline had in time become very much relaxed. The rich were idle and extravagant; the poor mutinous; young men were growing more and more insolent to their elders; religion was derided; all classes were animated by a common desire to make money and to spend it on sensual enjoyment."†

This was one side of the picture, the picture of the free-thinking, individualistic, culture and wealth seeking child of the age. On the other side we see the conservative, the representative of the good old times, who opposes the new thought, the new education, the new virtues, or rather the new vices, because intellectual pursuits seemed to him to lead "to irreligion and immorality, to make young people quite unlike their grandfathers, and were somehow connected with loose company and a fast life."‡

The new movement was represented by the Sophists. The term Sophist originally meant a wise and skilful man, but in the time we are describing it came to be applied to the professional teachers who traveled about, giving instruction for pay in the art of thinking and speaking,

Sophists

* *History of the Peloponnesian War*, Bk. III, 82.
† *The Greek Philosophers*, Vol. I, p. 74. ‡ Benn, *op. cit.*, p. 93.

and preparing young men for political life.* To this task they devoted themselves with feverish zeal. "If you associate with me," Protagoras is reported to have said to a young man, "on the very day you will return a better man than you came." And when Socrates asks how he is going to bring this about, he answers: "If he comes to me, he will learn that which he comes to learn. And this is prudence in affairs, private as well as public; he will learn to order his house in the best manner, and he will be able to speak and act for the best in the affairs of the State." † In order to fit himself for a career, it was necessary for the young man to perfect himself in dialectics, grammar, rhetoric, and oratory. Such subjects the Sophists began to study with a practical end in view, and thus broke the soil for new fields of investigation. They also turned their attention to moral and political questions, and so gave the impetus to a more systematic and thorough treatment of ethics and the theory of the State. As the moral earnestness of the times declined, and the desire to succeed at all hazards intensified, some of the later Sophists, in their anxiety to make their pupils efficient, often went to extremes; it became the object of instruction to teach them how to overcome an opponent in debate by fair means or foul, to make the worse appear the better cause, to confuse him with all sorts of logical fallacies, and to render him ridiculous in the eyes of the chuckling public.

The critical spirit of the age, which had, in a large measure, been fostered by philosophy, began to react upon philosophy itself and led to a temporary depreciation of metaphysical speculation. Thought weighs itself in the balance and finds itself wanting; philosophy digs its own grave. No two philosophers, so it is argued, seem to agree in their answers to the question of the essence of reality. One makes it water, another air, another fire, another earth, and yet another all of them together; one declares change to be impossible, another says there is nothing but change. Now, if there is no change, there can be no knowledge: we cannot predicate anything of anything, for how

* The name gradually became a term of reproach, partly because the Sophists took pay, partly owing to the radicalism of some of the later Sophists, which scandalized the conservative element.

† Plato's *Protagoras*.

can the one be the many? If everything changes, there can be no knowledge either; for where nothing persists, how can we predicate anything of anything? And if we can know things, only so far as they affect our senses, as some hold, again we cannot know, for then the nature of things eludes our grasp. The upshot of it all is, we cannot solve the riddle of the universe. The truth begins to dawn on the Sophist that the mind of man is an important factor in the process of knowing. Thinkers before him had assumed the competence of human reason to attain truth; with all their critical acumen they had forgotten to criticise the intellect itself. The Sophist now turns the light on the knowing subject and concludes that knowledge depends upon the particular knower, that what seems true to him *is* true for him, that there is no objective truth, but only subjective opinion. "Man is the measure of all things," so Protagoras taught. That is, the individual is a law unto himself in matters of knowledge. And from this theoretical skepticism, the step is not far to ethical skepticism, to the view that man is a law unto himself in matters of conduct. If knowledge is impossible, then knowledge of right and wrong is impossible, there is no universal right and wrong: conscience is a mere subjective affair. These consequences were not drawn by the older Sophists, by men like Protagoras (born about 490 B.C.) and Gorgias, but they were drawn by some of the younger radical set, by Polus, Thrasymachus, Callicles, and Euthydemus, who are spokesmen in Plato's *Dialogues*. Morality to them is a mere convention; it represents the will of those who have the power to enforce their demands on their fellows. The rules of morals are contrary to "nature." According to some, laws were made by the weak, the majority, in order to restrain the strong, the "best," to hinder the fittest from getting their due: the laws, therefore, violate the principle of natural justice. Natural right is the right of the stronger. According to others, the laws are a species of class legislation; they are made by the few, the strong, the privileged, in order to protect their own interests. That is, it is to the advantage of the overman that others obey the laws so that he can the more profitably break them.

"The makers of the laws," says Callicles in the Platonic dialogue *Gorgias*, "are the majority who are weak; and they make laws and

distribute praises and censures with a view to themselves and their own interests; and they terrify the stronger sort of men, and those who are able to get the better of them, in order that *they* may not get the better of them; and they say that dishonesty is shameful and unjust; meaning by the word injustice the desire of a man to have more than his neighbors; for knowing their own inferiority, I suspect that they are too glad of equality. And therefore the endeavor to have more than the many, is conventionally said to be shameful and unjust, and is called injustice, whereas nature herself intimates that it is just for the better to have more than the worse, the more powerful than the weaker; and in many ways she shows, among men as well as among animals, and indeed among whole cities and races, that justice consists in the superior ruling over and having more than the inferior. For on what principle of justice did Xerxes invade Hellas, or his father the Scythians? (not to speak of numberless other examples). Nay, but these are the men who act according to nature; yes, by heaven, and according to the law of nature: not, perhaps, according to that artificial law, which we invent and impose upon our fellows, of whom we take the best and the strongest from their youth upwards, and tame them like young lions,—charming them with the sound of the voice, and saying to them, that with equality they must be content, and that the equal is the honorable and the just. But if there were a man who had sufficient force, he would shake off and break through, and escape from all this; he would trample underfoot all our formulas and spells and charms and all our laws which are against nature: the slave would rise in rebellion and be lord over us, and the light of natural justice would shine forth."

Thrasymachus talks in the same strain in the *Republic:*

"The just is always a loser in comparison with the unjust. First of all, in private contracts: wherever the unjust is the partner of the just you will find that when the partnership is dissolved, the unjust man has always more and the just less. Secondly, in their dealings with the State: when there is an income-tax, the just man will pay more and the unjust less on the same amount of income; and when there is anything to be received the one gains nothing and the other much. Observe also what happens when they take an office; there is the just man neglecting his affairs and perhaps suffering other losses, and getting nothing out of the public, because he is just; moreover he is hated by his friends and acquaintances for refusing to serve them in unlawful ways. But all this is reversed in the case of the unjust man. I am speaking as before of injustice on the large scale in which the advantage of the unjust is most apparent; and my meaning will be most clearly seen if we turn to that highest form of injustice in which the criminal is the happiest of men, and the sufferers or those who refuse to do injustice are the most miserable,—that is to say tyranny, which by fraud and force takes away the property of others, not little by little but wholesale; comprehending in one, things sacred as well as profane, private and public; for which

acts of wrong, if he were detected perpetrating any of them singly, he would be punished and incur great disgrace,—they who do such wrong in particular cases are called robbers of temples, and man-stealers and burglars and swindlers and thieves. But when a man besides taking away the money of the citizens has made slaves of them, then, instead of these names of reproach, he is termed happy and blessed, not only by the citizens, but by all who have heard of the consummation of injustice. For mankind censure injustice, fearing that they may be the victims of it, and not because they shrink from committing it. And thus, as I have shown, Socrates, injustice, when on a sufficient scale, has more strength and freedom and mastery than justice; and, as I said at first, justice is the interest of the stronger, whereas injustice is a man's own profit and interest." *

Significance of Sophistry

Owing to the hostile criticisms of Plato and Aristotle, as well as to the nihilistic teachings of some of the younger Sophists, the importance of the Sophistic movement in the history of thought was long misjudged. It is only since Hegel and Grote attempted to give a fairer estimate of these thinkers that justice has been done them. There was good and there was evil in their teachings. Reflection and criticism are indispensable to sounder conceptions in philosophy, religion, morals, politics, and in all fields of human endeavor. The appeal to reason was commendable in itself, but the fault lay in the inability of Sophistry to use the instrument of reason in anything like a constructive way. The Sophists brought philosophy down from heaven to the dwellings of men, as Cicero said, and turned the attention from external nature to man himself; with them the proper study of mankind was man. But they failed to recognize the universal element in man; they did not see the forest for the trees, they did not see *man* for men. They exaggerated the differences in human judgments and ignored the agreements. They laid too much stress on the illusion of the senses. They emphasized the accidental, subjective, and purely personal elements in human knowledge and conduct, and failed to do justice to the objective element, the principles which are accepted by all.

Nevertheless, their criticisms of knowledge made necessary a profounder study of the problem of knowledge. The older speculators had naïvely and dogmatically assumed the competence of the mind to reach truth; in denying the possibility of

* Jowett's translation of Plato's *Dialogues*.

sure and universal knowledge, the Sophists forced philosophy to examine the thinking process itself and opened the way for a theory of knowledge. In employing all sorts of logical fallacies and sophisms, they made necessary a study of the correct laws of thought and hastened the birth of logic.

The same thing may be said of moral knowledge and practice. The appeal to the individual conscience was sound: from mere blind, unintelligent following of custom, morality was raised to the stage of reflective personal choice. When, however, the appeal became an appeal to mere subjective opinion and self-interest, it struck a false note. Independence of thought easily degenerates into intellectual and moral anarchy; individualism, into pure selfishness. Yet in this field, again, Sophistry rendered a service: radical criticism of the common notions of right and wrong and public and private justice, made necessary a profounder study of ethics and politics,—a study that was soon to bear wonderful fruit.

The great value of the entire Sophistic movement consisted in this: it awakened thought and challenged philosophy, religion, custom, morals, and the institutions based on them, to justify themselves to reason. In denying the possibility of knowledge, the Sophists made it necessary for knowledge to justify itself: they compelled philosophy to seek a criterion of knowledge. In attacking the traditional morality, they compelled morality to defend itself against skepticism and nihilism, and to find a rational principle of right and wrong. In attacking the traditional religious beliefs, they pressed upon thinkers the need of developing more consistent and purer conceptions of God. And in criticising the State and its laws, they made inevitable the development of a philosophic theory of the State. It became necessary to build upon more solid foundations, to go back to first principles. What is knowledge, what is truth? What is right, what is the good? What is the true conception of God? What is the meaning and purpose of the State and human institutions? And these problems, finally, forced the thinkers of Greece to reconsider, from new angles, the old question, which had been temporarily obscured, but which no people can long ignore: What is the world and man's place in nature?

Grote, *History of Greece,* vol. VII; Hegel, *History of Philosophy,* vol. II; Zeller, *Philosophy of the Greeks,* vol. II; Sidgwick, *The Sophists,* in *Journal of Philology,* vols. IV and V, 1872, 1873; Gomperz, *op. cit.,* vol. I; Benn, *op. cit.,* vol. I; articles on "Sophists," "Socrates," and "Plato" in *Britannica;* Schanz, *Die Sophisten.*

8. Socrates

Life of Socrates

We have described the situation, as it began to shape itself toward the end of the fifth century B.C. A man was needed to bring order into the intellectual and moral chaos of the age, to sift the true from the false, the essential from the accidental, to set men right and to help them to see things in their right relations,—a peacemaker who might hold the balance even between the ultra-conservatives and the ultra-liberals. The man appeared in Socrates, one of the greatest figures in the history of thought, the intellectual father of a line of philosophers whose ideas and ideals dominated Western civilization for two thousand years, and continue to influence speculation to this day.

Socrates was born in Athens, 469 B.C., the son of poor parents, his father being a sculptor, his mother a midwife. How he acquired an education, we do not know, but his love of knowledge evidently created opportunities in the cultured city for intellectual growth. He took up the occupation of his father, but soon felt "a divine vocation to examine himself by questioning other men." It was his custom to engage in converse with all sorts and conditions of men and women, on the streets, in the market-place, in the gymnasia, discussing the most diverse topics: war, politics, marriage, friendship, love, housekeeping, the arts and trades, poetry, religion, science, and, particularly, moral matters. Nothing human was foreign to him. Life with all its interests became the subject of his inquiries, and only the physical side of the world left him cold; he declared that he could learn nothing from trees and stones. He was subtle and keen, quick to discover the fallacies in an argument and skilful in steering the conversation to the very heart of the matter. Though kindly and gentle in disposition, and brimming over with good humor, he delighted in exposing the quacks and humbugs of his time and pricking their empty bubbles with his wit.

Socrates exemplified in his conduct the virtues which he taught: he was a man of remarkable self-control, magnanimous, noble, frugal, and capable of great endurance; and his wants were few. He gave ample proof, during his life of seventy years, of physical and moral courage, in war and in the performance of his political duties. His bearing at his trial furnishes an impressive picture of moral dignity, firmness, and consistency; he did what he thought was right, without fear or favor, and died as beautifully as he had lived, with charity for all and malice toward none; condemned by his own people, on a false charge of atheism and of corrupting the youth, to drink the poison hemlock (399 B.C.). His respect for authority and his loyalty to

the State he proved by obeying the laws himself and insisting that others obey them. When, after his condemnation, friends arranged a plan of escape, he refused to profit by it, on the ground that he had enjoyed the benefits of the laws during his whole life and could not, in his old age, prove disloyal to his benefactors.

In personal appearance Socrates was not prepossessing. He was short, stocky, and stout, blear-eyed and snub-nosed; he had a large mouth and thick lips, and was careless in his dress, clumsy and uncouth, resembling in his physical make-up a Satyr, for which reason Alcibiades, in Plato's *Symposium,* likened him to the busts of Silenus. But all these peculiarities were forgotten when he began to speak, so great were his personal charm and the effect of his brilliant conversation.

Xenophon, *Memorabilia,* transl. by Dakyns; Plato's *Dialogues,* especially *Protagoras, Apology, Crito, Phædo, Symposium, Theætetus,* transl. by Jowett; Aristotle, *Metaphysics* (I, 6; XIII, 4), transl. in Bohn Library, also by W. S. Ross; Aristotle, *Ethics,* transl. by Welldon. A. E. Taylor, *Varia Socratica,* criticises the traditional interpretations of Socrates. See also Joel, *Der echte und der xenophontische Socrates.*

Works mentioned under Sophists, p. 50; Chaignet, *La vie de Socrate;* Labriola, *La dottrina di Socrate;* Fouillée, *La philosophie de Socrate,* 2 vols.; Zuccante, *Socrate;* E. Pfleiderer, *Sokrates, Plato und ihre Schüler;* Pöhlmann, *Sokrates und sein Volk;* Döring, *Die Lehre des Sokrates als soziales Reformsystem;* Wildauer, *Sokrates' Lehre vom Willen.* See the extensive bibliography in Ueberweg-Heinze, § 33.

Problem of Truth

The chief concern of Socrates was to meet the challenge of Sophistry, which, in undermining knowledge, threatened the foundations of morality and the State. He looked upon philosophical reflection as the most timely and practical of tasks, for if skepticism was to be the last word of the age, there would be little hope of escaping the nihilistic conclusions of the fashionable views of life. He saw clearly that the prevailing ethical and political fallacies sprang from a total misconception of the meaning of truth, and that the problem of knowledge was the key to the entire situation. It was in this conviction, and with an optimistic faith in the power of human reason to meet the practical difficulties of his times, that he entered upon his mission. The aim which he set himself was not to construct a system of philosophy, but to arouse in men the love of truth and virtue, to help them to think right in order that they might live right. His purpose was practical rather than speculative; he was interested in the correct method of acquiring knowledge more than in a theory of such a method, or methodology. He did not offer a theory

at all, but practised a method, lived it, and, by his example, taught others to follow it.

In order to reach the truth, so his thought ran, we must not trust every chance opinion that enters our heads. Confused, vague, and empty thoughts fill our minds; we have a lot of undigested opinions which we have never examined, a lot of prejudices which we have accepted on faith, and of which we do not understand the meaning; we make a lot of arbitrary assertions for which we have no warrant. In fact, we have no knowledge at all, no convictions; we have built our intellectual house on sand; the whole edifice will tumble to pieces upon the slightest attack. It is our business to clear up our ideas, to understand the real meaning of terms, to define correctly the notions we employ, to know exactly what we are talking about. Then, too, we should have reasons for our views; prove our assertions,—*think,* not guess,—put our theories to the test, verify them by the facts, and modify and correct them in accordance with the facts.

The Sophists say there is no truth, we cannot know; men differ, opinion is set against opinion, and one is as good as another. This, says Socrates, is a mistake. There is diversity of thought, true; but it is our duty to discover whether, in the clash of opinions, there may not be agreement, some common ground on which all can stand, some principle to which all can subscribe. To evolve such universal judgments was the purpose of the Socratic method, which our philosopher employed in his discussions, and which is an ingenious form of cross-examination. He pretended not to know any more about the subject under discussion than the other participants; indeed, he often acted as though he knew less (the Socratic irony). Yet they soon felt that he was master of the situation, that he was making them contradict themselves, and all the while deftly guiding their thought into his own channels. "You are accustomed to ask most of your questions when you know very well how they stand," so one of his listeners complained. Before one's very eyes, the confused and erroneous notions of the disputants shape themselves into form, growing clear and distinct, and finally stand out like beautiful statues. Socrates had not learned the art of sculpture for nothing.

In discussing a subject, Socrates generally sets out from the popular and hastily formed opinions of his company. These he tests by means of illustrations taken from every-day life, showing, wherever possible and necessary, that they are not well-founded, and that they are in need of modification and correction. He helps those taking part in the dialogue to form the correct opinion, by suggesting instances of all kinds, and does not rest content until the truth has developed step by step. A well-known example will make this clear. By skilful questioning Socrates gets a young man named Euthydemus to confess his ambition to become a great politician and statesman. Socrates suggests to him that, in that case, he must, naturally, hope to be a just man himself. The young man thinks he is that already. We go on with the story as it is told by Xenophon.

Socratic Method

"But, says Socrates, there must be certain acts which are the proper products of justice, as of other functions or skills. No doubt. Then of course you can tell us what those acts and products are? Of course I can, and the products of injustice as well. Very good; then suppose we write down in two opposite columns what acts are products of justice and what of injustice. I agree, says Euthydemus. Well now, what of falsehood? In which column shall we put it? Why, of course in the unjust column. And cheating? In the same column. And stealing? In it too. And enslaving? Yes. Not one of these can go to the just column? Why, that would be an unheard-of thing. Well but, says Socrates, suppose a general has to deal with some enemy of his country that has done it great wrong; if he conquer and enslave this enemy, is that wrong? Certainly not. If he carries off the enemy's goods or cheats him in his strategy, what about these acts? Oh, of course they are quite right. But I thought you were talking about deceiving or ill-treating friends. Then in some cases we shall have to put these very same acts in both columns? I suppose so.

Well, now, suppose we confine ourselves to friends. Imagine a general with an army under him discouraged and disorganized. Suppose he tells them that reserves are coming up, and by cheating them into this belief, he saves them from their discouragement, and enables them to win a victory. What about this cheating of one's friends? Why, I suppose we shall have to put this too on the just side. Or suppose a lad needs medicine, but refuses to take it, and his father cheats him into the belief that it is something nice, and getting him to take it, saves his life; what about that cheat? That will have to go to the just side too. Or suppose you find a friend in desperate frenzy, and steal his sword from him for fear he should kill himself; what do you

say to that theft? That will have to go there too. But I thought you said there must be no cheating of friends? Well, I must take it all back, if you please. Very good. But now there is another point I should like to ask you. Whether do you think the man more unjust who is a voluntary violator of justice, or he who is an involuntary violator of it? Upon my word, Socrates, I no longer have any confidence in my answers. For the whole thing has turned out to be exactly the contrary of what I previously imagined." *

In this way, by a process of induction, Socrates evolves definitions. With the help of examples, a provisional definition is formed; this is tested by other examples, and broadened or narrowed to meet the requirements until a satisfactory result has been reached. What Bacon would call negative instances play an important rôle in the process, that is, cases which contradict the provisional definition offered. The aim is always to discover the essential characteristics of the subject to be defined, to reach clear and distinct notions, or concepts. At other times, Socrates tests the statements made, by going back at once to first principles, by criticising them in the light of correct definitions. Here the method is deductive. You say, for example, that this man is a better citizen than that one. Your assertion, however, is a mere subjective opinion, having no value whatever unless you can give reasons for it. You should know what a good citizen is, you should define your terms.

"Whenever any person contradicted him on any point who had nothing definite to say, and who perhaps asserted, without proof, that some person whom he mentioned, was wiser or better skilled in political affairs, or possessed of greater courage, or worthier in some such respect (than some other whom Socrates had mentioned), he would recall the whole argument, in some such way as the following, to the primary proposition: Do you say that he whom you commend, is *a better citizen* than he whom I commend? I do say so. Why should we not then consider, in the first place, what is the duty of *a good citizen?* Let us do so. Would not he then be superior in the management of the public money who should make the State richer? Undoubtedly. And he in war who should make it victorious over its enemies? Assuredly. And in an embassy he who should make friends of foes? Doubtless. And he in addressing the people who should check dissension and inspire them with unanimity? I think so. When the discussion was thus brought back to fundamental principles, the truth was made evident to those who had opposed him."

* Xenophon, *Memorabilia,* Book IV, ch. 2 (transl. by Marshall, *Greek Philosophy*).

"When he himself went through any subject in argument, he proceeded upon propositions of which the truth was generally acknowledged, thinking that a sure foundation was thus formed for his reasoning. Accordingly, whenever he spoke, he, of all men that I have known, most readily prevailed on his hearers to assent to his arguments; and he used to say that Homer had attributed to Ulysses the character of a sure orator, as being able to form his reasoning on points acknowledged by all mankind." *

Knowledge, then, is possible, after all. We can attain truth if we pursue the proper method, if we define our terms correctly, if we go back to first principles. Knowledge is concerned with the general and typical, not with the particular and accidental. This the Sophists failed to understand, and Socrates sets them right. He shared with them, however, the belief in the futility of physical and metaphysical speculations. "Indeed, in contrast to others, he set his face against all discussions of such high matters as the nature of the universe; how the 'cosmos,' as the savants phrase it, came into being; or by what forces the celestial phenomena arise. To trouble one's brain about such matters was, he argued, to play the fool." His interests were practical, and he did not see what was to come of such speculations. "The student of human learning," he said, "expects to make something of his studies for the benefit of himself or others, as he likes. Do these explorers into the divine operations hope that when they have discovered by what forces the various phenomenā occur, they will create winds and waters at will and fruitful seasons? Will they manipulate these and the like to suit their needs?" "He himself never wearied of discussing human topics. What is piety? what is impiety? What is the beautiful? what the ugly? What the noble? what the base? What is meant by just and unjust? What by sobriety and madness, what by courage and cowardice? What is a State? What is a statesman? What is a ruler over men? What is a ruling character? and other like problems, the knowledge of which, as he put it, conferred a patent of nobility on the possessor, whereas those who lacked the knowledge might deservedly be stigmatized as slaves." †

* Xenophon, *op. cit.*, IV, ch. 6, 12, ff.; transl. by J. S. Watson, Bohn Library.

† Xenophon, *op. cit.*, I, ch. 1, 11, ff. (transl. by Dakyns); see also IV, ch. 7.

Socrates's faith in knowledge, in clear and reasoned thinking, is strong,—so strong that he sees in it the cure of all our ills. He applies his method to all human problems, particularly to the field of morality, and seeks to find a rational basis for conduct. The radical thinkers, as we saw, looked upon the ethical ideas and practices of their times as mere conventions; after all, might makes right. The conservatives regarded them as self-evident: rules of conduct are not things about which one can reason; they have to be obeyed. Socrates endeavors to understand the meaning of morality, to discover a rational principle of right and wrong, a criterion by which to measure it. The question uppermost in his mind is: How shall I order my life? What is the rational way of living? How ought a reasoning being, a human being, to act? The Sophists cannot be right in saying that man is the measure of all things in the sense that whatever pleases *me,* the *particular* me, is right for me; that there is no universal good. There must be more to the matter than that; there must be some principle, or standard, or good, which all rational creatures recognize and accept when they come to think the problem out. What is *the* good, what is the good for the sake of which all else is good, the highest good?

Ethics

Knowledge is the highest good, so Socrates answers. Right thinking is essential to right action. In order to steer a ship or rule a State, a man must have knowledge of the construction and function of the ship, or of the nature and purpose of the State. Similarly, unless a man knows what virtue is, unless he knows the meaning of self-control and courage and justice and piety and their opposites, he cannot be virtuous; but, knowing what virtue is, he will be virtuous. "No man is voluntarily bad or involuntarily good." "No man voluntarily pursues evil or that which he thinks to be evil. To prefer evil to good is not in human nature; and when a man is compelled to choose between two evils, no one will choose the greater when he may have the less." The objection is raised that "we see the better and approve of it and pursue the evil." Socrates would have denied that we can truly know the good and not choose it. With him knowledge of right and wrong was not a mere theoretical opinion, but a firm practical conviction, a matter not only of

the intellect, but of the will. Besides, virtue is to a man's interest. The tendency of all honorable and useful actions is to make life painless and pleasant, hence the honorable work is the useful and good. Virtue and true happiness are identical; no one can be happy who is not temperate and brave and wise and just. "I do nothing," says Socrates in the *Apology*, "but go about persuading you all, old and young alike, not to take thought for your persons or properties, but first and chiefly to care about the greatest improvement of the soul. I tell you that virtue is not given by money, but that from virtue comes money and every other good of man, public as well as private." And the last words which he speaks at his trial are these: "Still I have a favor to ask of them [my condemners and accusers]. When my sons are grown up, I would ask you, oh my friends, to punish them; and I would have you trouble them as I have troubled you if they seem to care about riches or about anything, more than about virtue; or if they pretend to be something when they are really nothing,—then reprove them, as I have reproved you, for not caring about that for which they ought to care, and thinking that they are something when they are really nothing. And if you do this, both I and my sons will have received justice at your hands."

Pupils of Socrates

Socrates, as we have already pointed out, did not construct a system of metaphysics nor did he offer a theory of knowledge or of conduct. It remained for his pupils to build upon the foundations laid by the master. Some made the logical problems suggested by his method the subject of their study, others turned their attention to ethical questions and attempted to work out theories of ethics. The Megarian school, founded by Euclides (450-374 B.C.), combined the Socratic teaching that virtue is knowledge with the Eleatic doctrine of the unity of being: the notion of the good constitutes the eternal essence of things; nothing else,—neither matter, motion, nor the changing world of sense,—has real being. Hence, there can be but one virtue, and hence, also, external goods can have no value. The successors of Euclides exaggerated the dialectical phase of his teaching, after the man-

ner of Zeno, the Eleatic, and the Sophists, and delighted in all kinds of subtleties and hair-splitting (eristic).

Among the members of this school are Eubulides, Alexinus, Diodorus, and Stilpo. Phædo, of Elis, established the Elean (later Eretrian) school, which agreed with the Megarians.

Two ethical schools arose, each basing itself on certain phases of Socrates's teachings, the Cyrenaic, founded by Aristippus (born about 435) at Cyrene, and the Cynic, established by Antisthenes (+ 366) at the gymnasium of Cynosarges in Athens. The Cyrenaic doctrine, that pleasure is the highest good, was continued and completed by the Epicureans, while the Cynic teaching, which rejected the pleasure-theory and made virtue for virtue's sake its motto, was developed by the Stoics.

AGE OF RECONSTRUCTION

9. Plato

Plato and his Problem

None of these schools, however, succeeded in constructing comprehensive and thoroughgoing systems of thought; and yet, such an undertaking seemed necessary to complete the work begun by the great master. The problems suggested by him had to be thought out to the end; they were intimately connected with one another and with the problem of the ultimate nature of being, and they could not receive an adequate answer unless studied in their interrelations and as parts of a larger question. The problem of the meaning of human life, human knowledge, human conduct, and human institutions depended, for its complete answer, on the answer to the problem of the meaning of reality at large. It was the greatest pupil of Socrates, Plato, who undertook the task at hand; he offered not only a theory of knowledge, a theory of conduct, and a theory of the State, but crowned his work with a theory of the universe.

Plato was born 427 B.C., the son of noble parents. According to report, he first studied music, poetry, painting, and philosophy with other masters and became a pupil of Socrates in 407, remaining with him until the latter's death (399), when he accompanied the sorrowing

Socratics to Megara. He is said to have traveled in Egypt and Asia Minor, to have visited Italy and the Pythagoreans (388), and to have lived for a time at the court of Dionysius I, the tyrant of Syracuse, who became his enemy and sold him into slavery as a prisoner of war; but all of these stories have been denied. He founded a school in the groves of Academus, the *Academy,* where he taught mathematics and the different branches of philosophy, by means of connected lectures and the *dialogue,* a method that has been compared to our modern seminars. The story goes that he interrupted his work, on two occasions (367 and 361), by further visits to Syracuse, presumably in the hope of assisting in the realization of his ideal State, and that he was disappointed in this hope. His death occurred in 347 B.C. Plato was a poet and mystic, as well as a philosopher and dialectician; combining, in a rare degree, great powers of logical analysis and abstract thought with wonderful poetic imagination and deep mystical feeling. His character was noble; he was an aristocrat by birth and by temperament, an uncompromising idealist, hostile to everything base and vulgar.

It seems that all the works of Plato have come down to us. Of the writings, however, transmitted under his name (35 *Dialogues,* 13 *Letters,* and a collection of *Definitions*), the *Letters* (nearly all, at least) and *Definitions* are spurious. Of the dialogues, 28 are considered authentic by Hermann, 23 by Schleiermacher, 24 by Zeller and Heinze, and 22 by Lutoslawski. The testimony of Plato's pupil Aristotle as to the authenticity of a Platonic dialogue is unquestioned here, but unfortunately Aristotle does not mention all the works.

Attempts have been made by many scholars to arrange the dialogues in chronological order,* but it is not yet possible to state with certainty the exact time and order of their composition. A complete history of the development of Plato's doctrine is, therefore, still out of the question. We may, however, distinguish an earlier, Socratic, group, embracing the ethical dialogues, in which Plato does not advance materially beyond the standpoint of his teacher. To this belong: *Apology, Hippias Minor, Charmides, Laches, Lysis, Euthyphro, Crito,* and *Protagoras.* In a second group of writings, which is not so easy to specify as the first, he begins to develop his own view and to work out his methodology. To this group Zeller refers: *Phædrus* (which contains the summary of the teachings of this period), *Gorgias, Meno, Euthydemus, Theætetus, Sophist, Politicus, Parmenides,* and *Cratylus.* The completion of the system is reached in the last period, to which Zeller assigns: *Symposium, Phædo, Philebus, Republic, Timæus, Critias, Laws.* Zeller rejects, as not genuine, *Epinomis, Alcibiades I* and *II, Anteras, Hipparchus, Theages, Minos, Cleitophro, Hippias I, Io, Menexenus.*

Editions of works by Schanz, 1875, ff., and Burnet, 1902; translations by Jowett, 5 vols.; for other editions and translations see article by Campbell on Plato in *Britannica.* Ritchie, *Plato,* A. E. Taylor, *Plato;* Pater, *Plato and Platonism;* Adam, *Vitality of Platonism;* J. A. Stewart, *Plato's Doctrine of Ideas,* and *Myths of Plato;* Nettleship, *Lectures on the Republic,* and *Plato's Theory of Education;* Grote,

* Cf. Ueberweg-Heinze, § 40; "Plato" in *Britannica;* Lutoslawski, *Origin and Growth of Plato's Logic;* K. Joel, *op. cit.*

Plato, etc., and *History,* vol. VII; Windelband, *Plato;* Riehl, *Plato;* Ritter, *Plato,* and *Neuere Untersuchungen;* Natorp, *Plato's Ideenlehre,* and *Plato's Staat;* Fouillée, *La philosophie de Platon;* Bénard, *Platon;* Huit, *Platon,* 2 vols.; Indexes to Plato's works by Mitchell and Abbott.

Socrates had pointed out that in order to live a rational and good life we needs must have knowledge of the good, and that it is possible to attain such knowledge. He did not present a theory of the method of reaching it, but he practised the art of evolving truth in the form of the dialogue. This method Plato employs with wonderful artistic effect in his writings. But he also speculates on the method and meaning of truth, and outlines a theory of method, or dialectics, or logic, in which he discusses the art of forming and combining concepts, or the logical operations by means of which truth is reached. We have here the beginnings of a theory of knowledge and formal logic. Plato is not content, however, with telling how true concepts and judgments may be obtained; his chief object is to obtain them, to know reality in all its phases,—physical, mental, and moral,—to comprehend it in its unity and completeness. Indeed, it is plain to him that the knowledge-problem itself cannot be solved without an understanding of the nature of the world. To this end he develops a universal system, in the spirit of the teachings of the great thinker who became his ideal. Although Plato did not explicitly divide philosophy into logic, metaphysics (physics), and ethics (practical philosophy, including politics), he makes use of such a division in his works. We shall, therefore, follow this order, in a general way, in our exposition of his thought, and begin with logic, or dialectics.

Dialectics

Plato clearly understood the great importance of the problem of knowledge in the philosophy of his day. A thinker's conception of the nature and origin of knowledge largely determined his attitude toward the engrossing questions of the age. If our propositions are derived from sense-perception and opinion, Plato argued, then the Sophists are quite right in their contention that there can be no genuine knowledge. Sense-perception (*αἴσθησις*) does not reveal the true reality of things, but gives us mere appearance. Opinion (*δόξα*) may be true or false; as mere opinion it has no value whatever; it is not knowledge, but rests on persuasion or feeling;

it does not know whether it is true or false, it cannot justify itself. Genuine knowledge (ἐπιστήμη) is knowledge based on reasons, knowledge that knows itself as knowledge, knowledge that can authenticate itself. The great majority of men think without knowing why they think as they do, without having any grounds for their views. Ordinary virtue is no better off: it, too, rests on sense-perception and opinion; it is not conscious of its principles. Men do not know why they act as they do; they act instinctively, according to custom or habit, like ants, bees, and wasps; they act selfishly, for pleasure and profit, hence the masses are a great unconscious Sophist. The Sophist is wrong because he confuses appearance and reality, the pleasant and the good.

We must advance from sense-perception and opinion to genuine knowledge. This we cannot do unless we have a desire, or love of truth, the *Eros*, which is aroused by the contemplation of beautiful ideas: we pass from the contemplation of beauty to the contemplation of truth. The love of truth impels us to dialectics; it impels us to rise beyond sense-perception to the idea, to conceptual knowledge, from the particular to the universal. The dialectical method consists, first, in the comprehension of scattered particulars in one idea (συναγωγή), and second, in the division (διαίρεσις) of the idea into species, that is, in the processes of generalization and classification. In this way alone can there be clear and consistent thinking; we pass from concept to concept, upward and downward, generalizing and particularizing, combining and dividing, synthetizing and analyzing, carving out concepts as a sculptor carves a beautiful figure out of a block of marble. Judgment expresses the relation of concepts to one another, articulates concept with concept, while the syllogism links judgment with judgment, in the process of reasoning. Dialectics is this art of thinking in concepts; concepts, and not sensations or images, constitute the essential object of thought. We cannot, for example, call a man just or unjust unless we have a notion, or concept, of justice, unless we *know* what justice is; when we know that, we can judge why a man is just or unjust.

But, Plato warns us, the notion or idea (of justice, for example) does not have its origin in experience; we do not derive

it from particular cases (of justice), by induction. These are merely the means of clearing up, or bringing to consciousness, or making explicit, the notion (of justice) which already exists obscurely, or implicitly, in the soul. When the notion has been evolved, other notions may be deduced from it; we develop its implications or meanings, and so reach new and absolutely certain knowledge. Man is, therefore, indeed, the measure of all things, of all truth, because there lie imbedded in his soul certain universal principles, notions, concepts, or ideas, which form the starting-point of all his knowledge.

Experience, then, is not the source of our notions; there is nothing in experience, in the world of sense, exactly corresponding to them,—to the notions of truth, beauty, goodness, for example;—no particular object is absolutely beautiful or good. We approach the sense-world with ideals or standards of the true, the beautiful, and the good. In addition to these notions, Plato came to regard mathematical concepts and certain logical notions, or categories, such as being and non-being, identity and difference, unity and plurality, as inborn, or *a priori*.

Conceptual knowledge, then, is the only genuine knowledge: that was the teaching of Socrates. The question, however, arises: What guarantee have we of its truth? Plato bases his answer on the metaphysical teachings of several of his predecessors. Knowledge is the correspondence of thought and reality, or being: it must have an object. Hence, if the idea or notion is to have any value as knowledge, something real must correspond to it,—there must, for instance, be pure, absolute beauty as such,—realities must exist corresponding to our universal ideas. In other words, such ideas cannot be mere passing thoughts in men's heads; the truths of mathematics, the ideals of beauty, truth, and goodness, must be real, must have independent existence. If the objects of our ideas were not real, our knowledge would not be knowledge; hence they must be real.

The same result is reached in another way. Truth is the knowledge of reality, of being as such, of that which is. The world perceived by our senses is not the true world; it is a changing, fleeting world, one thing to-day, something else to-

morrow (Heraclitus); it is mere appearance, illusion. True being is something permanent, unchangeable, eternal (Parmenides). Hence, in order to have genuine knowledge, we must know the permanent and unchangeable essence of things. Thought alone, conceptual thought, can grasp eternal and changeless being; it knows that which is, that which persists, that which remains one and the same in all change and diversity, the essential *forms* of things.

Plato found it necessary, in short, to appeal to metaphysics, to his world-view, for the proof of the validity of knowledge. Sense-knowledge,—the kind the Sophist believed in,—presents to us the passing, changing, particular, and accidental; hence it cannot be genuine knowledge: it does not tell the truth or get at the heart of reality. Conceptual knowledge reveals the universal, changeless, and essential element in things and is, therefore, true knowledge. Philosophy has for its aim knowledge of the universal, unchangeable, and eternal.

Doctrine of Ideas

The idea, or notion, or concept, as we have seen, comprehends or holds together the essential qualities common to many particulars: the essence of things consists in their necessary form. We are apt to consider such ideas as mental processes only: particulars alone exist, there is nothing corresponding to the idea or type outside of the mind; "I see a horse, but 'horseness' I do not see," as Antisthenes is reported to have said. Plato did not share this view; according to him, the ideas or forms (*ἰδέαι, εἴδη, μορφαί*) are not mere thoughts in the minds of men or even in the mind of God (indeed, the divine thought is dependent on them); he conceives them as existing in and for themselves, they have the character of substantiality, they are substances (*οὐσίαι*), real or substantial forms: the original, eternal transcendent archetypes (*παραδείγματα*) of things, existing prior to things and apart from them (*χωρίς*), independent of them, uninfluenced by the changes to which they are subject. The particular objects which we perceive are imperfect copies or reflections of these eternal patterns; particulars may come and particulars may go, but the idea or form goes on forever. Men may come and men may go, but the man-type, the human race, goes on forever. There are many objects or copies, but there is always

only *one* idea of a class of things. There are numberless such independent forms, or ideas, nothing being too lowly or insignificant to have its idea: ideas of things, relations, qualities, actions; ideas of tables and beds and chairs, of color and tone; of health, rest, and motion; of smallness, greatness, likeness; of beauty, truth, and goodness.

These ideas or archetypes, though numberless, are not disordered, like chaos; they constitute a well-ordered world, or rational cosmos (κόσμος νοητός). The ideal order forms an interrelated, connected organic unity, the ideas being arranged in logical order, and subsumed under the highest idea, the idea of the Good, which is the source of all the rest. This idea is supreme; beyond it there is no other. The truly real and the truly good are identical; the idea of the Good is the *logos,* the cosmic purpose. Unity, therefore, includes plurality; in the intelligible or ideal world there is no unity without plurality, and no plurality without unity (Parmenides). The universe is conceived by Plato as a logical system of ideas: it forms an organic spiritual unity, governed by a universal purpose, the idea of the Good, and is, therefore, a rational moral whole. Its meaning cannot be grasped by the senses, which perceive only its imperfect and fleeting reflections and never rise to a vision of the perfect and abiding whole. It is the business of philosophy to understand its inner order and connection, to conceive its essence by logical thought.

We have, in this framework of the Platonic system, a combination and transformation of the teachings of the leaders of Greek thought. With the Sophists Plato agrees that knowledge (of appearances) is impossible; with Socrates, that genuine knowledge is always of concepts; with Heraclitus, that the world (of appearances) is in constant change; with the Eleatics, that the world (of ideas) is unchangeable; with the Atomists, that being is plural (ideas); with the Eleatics, that it is one; with nearly all the Greek thinkers, that it is at bottom rational; with Anaxagoras that mind rules it and that mind is distinct from matter. His system is the mature fruit of the history of Greek philosophy down to his time.

We turn now to the relation of this ideal world to the *so-called* real world. As was said before, the particular objects in nature

are copies of ideas. How is this to be understood? How can the pure and perfect, changeless principle be responsible for the incomplete and ever-changing world of sense? There is another principle, which is everything that idea is not, and to which sensuous existence owes its imperfections. This principle, which Aristotle calls the Platonic "matter," forms the basis of the phenomenal world; as such it is the raw material (ἐκμαγεῖον) upon which the forms are somehow impressed. It is perishable and unreal, imperfect, —non-being (μὴ ὄν);—whatever reality, form, or beauty the *perceived* world has, it owes to ideas. Some interpreters of Plato conceive this Platonic "matter" as space; others as a formless, space-filling mass. Plato needs something besides the idea to account for our world of sense, or nature, which is not a mere illusion of the senses, but an order of lower rank than the changeless ideal realm. This substratum, untouched by the ideal principle, must be conceived as devoid of all qualities,—formless, undefinable, imperceptible. Nature owes its existence to the influence of the ideal world on non-being or matter: as a ray of light, passed through a prism, is broken into many rays, so the idea is broken into many objects by matter. The formless something is non-being, not in the sense of being non-existent, but in the sense of having a lower order of existence: the term non-being expresses a judgment of value. The sensible world partakes of a measure of reality or being, in so far as it takes on form. Plato does not define more precisely the nature of the relation between the two realms; but it is plain that the ideas are somehow responsible for all the reality things possess: they owe their being to the presence of ideas, to the participation of the latter in them. At the same time, non-being, the substratum, is responsible for the diversity and imperfection of the many different objects bearing the same name; as Zeller says, it is a second kind of causality, the causality of a blind, irrational necessity. There are, then, two principles; we should say, mind and matter, of which mind is the true reality, the thing of most worth, that to which everything owes its form and essence, the principle of law and order in the universe; while the other element, matter, is secondary, a dull, irrational, recalcitrant force, the unwilling slave of mind, which somehow, but

Philosophy of Nature

imperfectly, takes on the impress of mind. Form is the active cause, matter is the coöperative cause. It is both friend and foe, an auxiliary and an obstruction, the ground of physical and moral evil, of change and imperfection. Since the world of ideas is identical with the Good, the non-ideal *must* be evil. If we had to label this part of the system, we should call it *dualism.* It is idealistic, or spiritualistic, in so far as it makes mind the paramount principle of things and matter a secondary principle. In any case, it is thoroughly anti-materialistic and anti-mechanistic.

Plato attempts to explain the origin of nature in his *Timæus,* a work that reminds one of the early Pre-Socratic philosophies. He presents a cosmology which is shot through with many mythical elements and often contradicts his other teachings, but he claims for it nothing more than probability. Like a human artist or workman, the Demiurge or Creator fashions the world after the pattern of the ideal world; guided by the idea of the Good, he forms as perfect a universe as it is possible for him to form, hampered, as he is, by the principle of matter. The Demiurge is not really a creator, but an architect; the two principles, mind and matter, are already in existence: a being is needed who will bring them together. In order to realize his purpose, he endows the world, which is composed of the four material elements, earth, air, fire, water, with soul and life. This world-soul he compounds of the indivisible and divisible, of identity and change, of mind and matter (the four elements), in order that it may know the ideal and perceive the corporeal. It has its own original motion, which is the cause of all motion; in moving itself it also moves bodies; it is diffused throughout the world and is the cause of the beauty, order, and harmony in the world: this is the image of God, a visible God. The world-soul is the intermediary between the world of ideas and the world of phenomena. It is the cause of all law, mathematical relations, harmony, order, uniformity, life, mind, and knowledge: it moves according to fixed laws of its nature, causing the distribution of matter in the heavenly spheres, as well as their motion. Besides the world-soul, the Creator created souls or gods for the planets (which he arranged according to the Pythagorean system of harmony) and rational

human souls, leaving it to the lower gods to create animals and the irrational part of the human soul. Everything has been made for man, plants to nourish him, and animal-bodies to serve as habitations for fallen souls.

We have, therefore, in Plato's cosmology many gods, to none of whom he definitely ascribes personality, perhaps because he took this for granted, conceiving them in analogy with the human soul: the Idea of the Good, the total world of ideas, the Demiurge, the world-soul, the planetary souls, and the gods of the popular religion.

This cosmology is a teleological world-view in mythical garb, an attempt to explain reality as a purposeful, well-ordered cosmos, the work of an intelligence, guided by reason and an ethical purpose. Purposes or final causes are the real causes of the world, the physical causes are merely coöperating causes: whatever is good and rational and purposeful in the universe is due to reason; whatever is evil, irrational, and purposeless is due to mechanical causes.

The theory of knowledge has shown us that there are three kinds of knowledge,—sense-perception, opinion, and genuine knowledge or Science (*Wissenschaft*). This division influences Plato's psychology. In sensation and opinion the soul is dependent on the body; in so far as it beholds the pure world of ideas, it is pure reason. The bodily part is, therefore, an impediment to knowledge, from which the soul must free itself in order to behold truth in its purity. The copies of the pure ideas, as they exist in the phenomenal world, merely incite the rational soul to think; sensation provokes ideas, it does not produce them. Hence, the soul must somehow possess ideas prior to its contact with the world of experience. Plato teaches that the soul has viewed such ideas before, but has forgotten them; the imperfect copies of ideas in the world of sense bring back its past, remind it, as it were, of what it has seen before: all knowledge is reminiscence (anamnesis) and all learning a reawakening. (Read the myth of the charioteer in the *Phædrus*.) Hence, the soul must have existed before its union with a body (pre-existence).

Psychology

The human soul, then, is, in part, pure reason (*νοῦς*), and

this rational part is its characteristic phase. It enters a body, and there is added to it a mortal and irrational part, which fits it for existence in the sense-world. This is divided into the spirited part (θυμός),—by which Plato means the nobler impulses (anger, ambition, love of power), situated in the heart,—and desire (τὸ ἐπιθυμητικόν),—by which he means the lower appetites or passions, the part with which the soul loves and hungers and thirsts, placed by him in the liver. The union with the body is a hindrance to the *intellectual* aspirations of the soul, to knowledge; the presence of impulses and desires is a hindrance to the ethical supremacy of reason, which reason itself must seek to overcome, as Plato shows in his ethics. A soul that has contemplated the pure eternal ideas must, in part at least, be like these ideas, pure and eternal; for only like can know like. The doctrine of reminiscence proves the preëxistence and continued existence of the soul. Other proofs of immortality are: the simplicity of the soul: whatever is simple cannot be decomposed; and its life or spontaneity: such a principle of activity cannot be destroyed; life cannot become death (*Phædo*).

The question arises, How does the pure rational soul happen to unite with a body? At this point, again, Plato has recourse to mythical explanation, combining conceptions suggested by his theory of knowledge, and conceptions suggested by empirical psychology, with Orphic and Pythagorean mysticism. The pure rational soul, which was created by the Demiurge, once inhabited a star. But it became possessed with a desire for the world of sense and was inclosed in a material body as in a prison. In case it succeeds in overcoming the lower side of its nature, it will return to its star, otherwise it will sink lower and lower, passing through the bodies of different animals (transmigration of souls). If the soul had resisted desire in its celestial life, it would have continued to occupy itself, in a transcendent existence, with the contemplation of ideas. As it is, it is condemned to pass through a stage of purification.

An important phase of Plato's psychology is the doctrine of the Eros. Just as sense-perception arouses in the soul the remembrance of pure ideas, or Truth, so the perception of sensuous beauty, which arouses sense-love, also arouses in the soul the memory of ideal Beauty contemplated in its former existence.

This recollection arouses yearning for the higher life, the world of pure ideas. Sensuous love and the yearning for the beautiful and the good are one and the same impulse; in yearning for eternal values, the soul yearns for immortality. The sensuous impulse seeks the continued existence of the species; the higher forms of the impulse are the craving for fame, the impulse to create science, art, and human institutions. These impulses are another evidence of the immortality of the soul, for what the soul desires must be attainable.

Ethics

The question of greatest moment to Socrates was the question of the good. What is the nature or meaning of the good, what is a good life, and how can we justify such a life to reason? How should a rational being act; what ought to be his controlling principle? Socrates raised the problem and gave his answer. He did not offer a complete philosophy of life in systematic form, but laid the foundations for such a structure. Plato takes up the problem and seeks to solve it in the light of his comprehensive world-view. As we said before, the question of the meaning and worth of life and human institutions he regards as involved in the larger question of the nature and meaning of the world and of man. His ethics, like his theory of knowledge, is based on his metaphysics.

The universe is, at bottom, a rational universe: a spiritual system. Objects of sense, the material phenomena around us, are mere fleeting shadows of eternal and never-changing ideas; they cannot endure and have no worth. Only that which endures is real and has value: reason alone has absolute worth and is the highest good. Hence, the rational part of man is the true part, and his ideal must be to cultivate reason, the immortal side of his soul. The body and the senses are not the true part; indeed, the body is the prison-house of the soul, a fetter, deliverance from which is the final goal of the spirit. "Wherefore we ought to fly away from earth as quickly as we can, and to fly away is to become like God." The release of the soul from the body and the contemplation of the beautiful world of ideas, that is the ultimate end of life.

In the meanwhile the soul, with its reason, its spirited part, and its appetites, is inclosed in its dungeon and has its problems

to solve. The rational part is wise and has to exercise forethought on behalf of the entire soul: hence, its essential function is to command. The individual is *wise* in whom reason rules over the other impulses of the soul, knowing what is advantageous for the whole inner economy and for each member of it. The province of the spirited part (will) is to be the subject and ally of reason: music and gymnastics will bring these two principles into unison. When they have been trained and educated, they will exercise control over the appetites. Reason takes counsel, will fights the battles of reason, obeys it, and gives effect to its counsels by its bravery. An individual, therefore, is *brave* when the spirited part holds fast, through pain and pleasure, to the instructions of reason as to what is to be feared and what is not. He is *temperate* when will and appetite agree with reason, submit to its authority. Temperance, or self-control, is mastery over certain kinds of pleasures and desires. When these three inward principles are in tune, each doing its proper work, the man is *just*. The just and honorable course is that which a man pursues in this frame of mind; he has the ethical attitude when he is wise and brave and temperate, when he has harmonized his soul. Such a man would not repudiate a deposit, commit sacrilege or theft, be false to friends, be a traitor to his country, or commit similar misdeeds.

The ideal, therefore, is a well-ordered soul, one in which the higher functions rule the lower, one which exercises the virtues of wisdom (*σοφία*), courage (*ἀνδρεία*), self-control (*σωφροσύνη*), and justice (*δικαιοσύνη*). A life of reason, which means a life of virtue, is the highest good. Happiness attends such a life; the just man is after all the happy man. Pleasure, however, is not an end in itself,—it is not the highest factor in the life of the soul, but the lowest.

There is in Plato's ethical teaching another side to which we have already referred, and which lays extreme emphasis on the rational element in the soul, regarding the irrational aspect as something not merely to be subordinated, but to be cast out. This part of the teaching differs from the usual Greek conception; it is ascetic in its tone, it is the doctrine of *contemptus mundi*, which we find in primitive Christianity: the world we perceive is but a passing show: " the glory of the world passeth

away, and the lust thereof." That which endures, for Plato, is reason, truth; all else is vanity. Matter is imperfection, a dead weight on the soul; to be free from this clog and to lose oneself in the contemplation of beautiful ideas, or to see God, as the Christians put it, is a consummation devoutly to be wished. Here the Platonic philosophy culminates in mysticism.

Plato's theory of the State, which is given in the *Republic,* is based on his ethics. Since virtue is the highest good, and the individual cannot attain the good in isolation, but only in society, the mission of the State is to realize virtue and happiness; the purpose of its constitution and its laws is to bring about conditions which will enable as many men as possible to become good; that is, to secure the general welfare. Social life is a means to the perfection of individuals, not an end in itself. It is true, the individual must subordinate his private interests to the public welfare, but that is only because his own true good is bound up with the social weal. If all men were rational and virtuous, there would be no need of laws and a State: a completely virtuous man is governed by reason, and not by external law. Few, however, are perfect; and laws are necessary to the realization of our true good. The State owes its origin to necessity.

Politics

The State should be organized like the universe at large and the individual virtuous soul; that is, reason should rule in it. There are as many classes in society as there are functions of the soul, and the relations of these classes to each other should correspond to those obtaining in a healthy soul. Those who have received philosophical training represent reason and ought to be the ruling class; the warrior class represent the spirited element or will: their task is defense; the agriculturists, artisans, and merchants represent the lower appetites, and have as their function the production of material goods.* Justice is realized in a State in which each class, the industrial, military, and guardian, does its own work and sticks to its own business. A State is temperate and brave and wise in consequence of certain affections and conditions of these same classes. It is master

* Among the nations, Plato regarded the Phœnicians as representing the lower appetites, the barbarous peoples of the North as representing the spirited element or will, the Greeks as representing reason.

of itself when the desires of the vulgar many are controlled by the desires and the wisdom of the few, when the governors and the governed are unanimous on the question who ought to govern. Every individual ought to have some one occupation in the State, which should be that to which his natural capacity is best adapted. Justice is to have and do what belongs to us and is our own; to mind one's business and not to be meddlesome.

The ideal society forms a complete unity, one large family; hence, Plato opposes private property and monogamous marriage, and recommends, for the two upper castes (who are to be supported by the workers), communism and the common possession of wives and children. Among his other recommendations are supervision of marriages and births (eugenics), exposure of weak children, compulsory state education, education of women for war and government, censorship of works of art and literature. Plato did not have a high opinion of art, regarding it as an imitation of the world of sense, which is itself a mere copy of the true essences of things; art, therefore, is an imitation of an imitation. It can and should, however, he thought, be made a means to moral culture.

The State is an educational institution, the instrument of civilization, and as such it must have its foundation in the highest kind of knowledge attainable, that is, philosophy. "Unless it happen either that philosophers acquire the kingly power in states, or that those who are now called kings and potentates be imbued with a sufficient measure of genuine philosophy, that is to say, unless political power and philosophy be united in the same person . . . there will be no deliverance for cities nor yet for the human race." The State shall undertake the education of the children (of the higher classes), following a definite plan of instruction, which shall be the same for the first twenty years of life and apply to both sexes, and shall include: bodily exercises (in infancy); the narration of myths with a view to ethical culture; gymnastics, which develops not only the body but the will; reading and writing; poetry and music, which arouse the sense of beauty, harmony, and proportion and encourage philosophical thought; mathematics, which tends to draw the mind from the sensuous to the real; and military

exercises. A selection of the choice characters shall be made from the ranks of the young men at twenty, and these shall study the different subjects of their childhood in their interrelations and learn to survey them as a whole. Those who, at the age of thirty, show the greatest ability in these fields, in military affairs, and other branches of discipline will study dialectics for five years, after which they will be put to the test in holding military commands and secondary civic offices. At the age of fifty those who have shown themselves worthy will devote themselves to the study of philosophy until their turn comes to administer the higher offices for their country's sake.

Plato's *Republic* is an ideal of a perfect state, the dream of a kingdom of God on earth. It is frequently spoken of as Utopian. It must be remembered, however, that it was conceived by Plato as a small city-state, that many of his "ideals" were actual realities in Sparta, and that not a few of them are regarded as matters of fact to-day.

In his later work, the *Laws,* Plato greatly modifies his political theory. A good State should have, besides reason or insight, freedom and friendship. All citizens should be free and have a share in the government; they are to be landowners, while all trade and commerce should be given over to serfs and foreigners. The family is restored to its natural position. Knowledge is not everything: there are other motives of virtuous conduct, *e.g.,* pleasure and friendship, pain and hate. Virtue, however, remains the ideal, and the education of the moral will the goal.

Plato's philosophy is rationalistic in the sense that it holds a rational knowledge of the universe to be possible, as well as in the sense that the source of knowledge lies in reason and not in sense-perception. Experience, however, is a necessary means of arousing our *a priori* ideas. It is realistic in the sense that it affirms the existence of a real world; idealistic, or spiritualistic, in the sense that this world is conceived as an ideal or mental world; phenomenalistic in the sense that the sense-world is a world of appearances or phenomena of the real world. In this sense, too, it is radically anti-materialistic. It is pantheistic in the sense that all phenomena are looked upon as mani-

Plato's Historical Position

festations of an intelligible world-order, and also in the sense of introducing an all-uniting world-soul. It is theistic in the sense of admitting a Creator, or Demiurge, though this figure is mythical, and philosophically out of place in the system. It teaches transcendency in that its ideal world transcends the world of experience: the pure ideas seem to shun the contamination of the material element; immanency, in that the world-soul is diffused over all space. It is anti-mechanistic and teleological in that it seeks the ultimate explanation of the world in final causes or purposes, embracing all these under a universal purpose: the idea of the Good. It is dualistic in the sense that it has two principles of explanation, mind and matter. It is fundamentally ethical in that the final cause of the whole world is the idea of the Good. Its ethical theory is anti-hedonistic, intuitionistic, and idealistic, a self-realization theory we might say, though the term is apt to be misunderstood. Its political theory is aristocratic and socialistic.

The great influence of this system on later Greek thought and on Christian philosophy and theology is easily understood. It is a world-view with a remarkable span, attempting to rationalize nearly every field of human interest and endeavor. To Christianity, when it sought to make its message intelligible and reasonable to the educated Roman world, it became a treasure-house of thoughts. Its idealism, its teleology, its conception of a system of ideas as patterns of the world, its dualism, its mysticism, its contempt for matter and the world of sense, its ethical State, its proofs for the immortality of the soul, its doctrine of the fall of man,—all these teachings, and many more besides, were welcome gifts to those who wished to justify the new faith to reason. We shall have occasion, later on, to point out how much Christian theology owed to the Greeks, and how profoundly the greatest thinker of the early Church, St. Augustine, was influenced by Plato. And what a vital force his idealism has remained in the philosophy of the entire European world, down to the present, will be seen at every step.

The Academy established by Plato was continued by his pupils after his death. The school at first followed the Pythagorean doctrines which Plato had adopted during his old age, and iden-

tified ideas with numbers. It also emphasized the ethical studies. This phase of the school is called the Older Academy: its scholarchs or heads were Plato's nephew, Speusippus (from 347 to 339 B.C.), Xenocrates (339-314), Polemo (314-270), and Crates (270-247). Other members of the Old Academy were: Heraclides of Pontus, Philippus of Opus, Hestiæus of Perinthus, and Eudoxus of Cnidus. Crates's successor Arcesilaus (247-241) introduced skepticism into the Academy and founded the second or Middle Academy, which remained true to the teachings of Arcesilaus until Carneades became its head (before 156), and the founder of the third or New Academy. (See pp. 116, ff.)

Platonic School

10. Aristotle

Plato was the first Greek thinker to construct an idealistic philosophy on a comprehensive scale. The system, however, presented difficulties and inconsistencies, which had to be considered and, if possible, overcome. The early Platonic school did little to develop the thought of its founder; it did what schools generally do, it transmitted his doctrines very largely as they had been received. It was left to Aristotle, a pupil of independent mind, to reconstruct the system, to develop it in what seemed to him a more consistent and scientific manner. First of all, the problem of transcendent ideas had to be reconsidered: Plato seemed to place the eternal forms (as Aristotle calls them) beyond the stars, to separate them from the actual world of experience, and to degrade this to mere appearance. Then there was the conception of the secondary element, the Platonic matter, which needed to be defined more precisely in order to become a satisfactory principle of explanation. The gulf between form and matter had to be bridged somehow: how could the remote and changeless ideas place their impress upon a lifeless and irrational substratum? Other difficulties presented themselves. How shall we account for the progressively changing forms of things; how for the existence of individual immortal souls and their presence in human bodies? The Demiurge and the world-soul are makeshifts; the recourse to mythology and the popular religion a

Aristotle's Problems

confession of ignorance. The dualism remains and extends to every phase of the system, and the problems are not solved. So at least it seemed to Plato's pupil.

Aristotle retains the changeless eternal forms, the idealistic principles of the teacher, but rejects their transcendency. He brings them down from heaven to earth, so to speak. Forms are not *apart from* things, but in them; they are not transcendent, but immanent. Matter is not non-being (*μὴ ὄν*) but dynamic (*δυνάμει ὄν*); form and matter are not separate, but eternally together: matter realizes the form or idea of the thing, moves and changes, grows, or evolves formward. The world of sense, the phenomenal order, is not a mere imitation or shadow of the real world; it *is* the real world, form and matter in one, and the true object of Science. It is because he conceives it so that Aristotle feels at home in it, that he studies it sympathetically, that his theories always keep in close touch with it, and that he encourages the natural sciences.

Aristotle was born 384 B.C., in Stagira, the son of Nicomachus, the court physician of Philip of Macedon. At the age of seventeen he entered Plato's Academy, where he remained for twenty years as student and teacher. After the death of Plato (347), he journeyed to Assos, in Mysia, thence to Mitylene, and is said to have returned to Athens to open a school of rhetoric. In 342 he was called by King Philip to direct the education of his son Alexander, afterwards called the Great. Seven years later he came back to Athens, this time to establish a school in the gymnasium dedicated to the Lycean Apollo, from which the school received its historic name, the Lyceum. (It has also been called the *Peripatetic School,* because of Aristotle's habit of walking while giving instruction.) He taught by means of lectures and the dialogue. After the sudden death of Alexander in 323, the philosopher was accused of sacrilege by the anti-Macedonian party at Athens and compelled to flee to Eubœa, where he died 322 B.C.

Aristotle was a man of noble character, realizing in his personality the Greek ideal of measure and harmony taught in his system of ethics. His love of truth was strong, his judgment sober, impartial, and acute; he was a master of dialectics, a lover of detail, a great reader, a close observer, and a specialist. His literary style was like his thinking, sober, scientific, familiar, free from embellishment and flights of fancy, even dry. One seldom feels the glow of his own personality in his works; it is only on rare occasions that he gives expression to his emotions. In these respects, he was unlike his great teacher Plato. In perusing his works we seem to be in the presence of calm impersonal reason. He is, however, one of the greatest figures in the history of thought, a universal genius. He wrote on a large

number of topics: logic, rhetoric, poetics, physics, botany, zoölogy, psychology, ethics, economics, politics, and metaphysics.

A large collection of writings attributed to Aristotle has come down to us, most of them genuine. Many of his books, however, seem to have been lost. Andronicus, who published an edition of his works between 60 and 50 B.C., places the number of books (chapters, we should say) written by Aristotle at 1000. Of the works published by him for wider circles of readers, only fragments remain; the material that has been preserved represents his lectures to his pupils and was not intended for publication.

We may, following Zeller, arrange the extant writings in the following groups: (1) Logic (writings called by the followers of Aristotle the *Organon,* the organ or instrument for acquiring knowledge). *Categories* (mutilated and added to by later hands; largely genuine, though this is doubted by some authorities); *Propositions* (gives the Aristotelian teaching, but is not genuine); the two *Analytics* (Syllogism; Definition, Classification, Demonstration); *Topics* (nine books on Probability). *Sophistic Fallacies* is the last book of the *Topics.*

(2) Rhetoric. *Rhetoric to Theodectes* (based on Aristotle's teachings, but not his work); *Rhetoric to Alexander* (spurious); *Rhetoric* (three books, third doubtful). The theory of art is presented in the *Poetics,* of which only a part remains.

(3) Metaphysics. A series of fourteen books, dealing mainly with first principles, were placed, in the collection of Andronicus, immediately after the writings on physics, and bore the heading *τὰ μετὰ τὰ φυσικά* (meta ta physica, or writings coming after the writings on physics), simply to indicate their position in the collection. This is the origin of the term metaphysics: Aristotle himself never used it, but called such discussions of first principles "First Philosophy." These fourteen books were not intended by Aristotle as a single work. Book II (a) and parts of Book XI are spurious.

(4) Natural Sciences. *Physics* (eight books, Book VII an interpolation); *Astronomy* (four books); *Origin and Decay* (two books); *Meteorology* (four books); *Cosmology* (spurious); *Botany* (spurious); *History of Animals* (ten books, Book X spurious); *On the Parts of Animals* (four books); *On the Progression of Animals* (not genuine, according to some); *On the Origin of Animals* (five books); *On the Locomotion of Animals* (spurious). Psychology. *On the Soul* (eight books, three treating of sensation, memory, sleep and waking; others, called *parva naturalia,* are smaller treatises, which have been added, while the last book on breathing is post-Aristotelian).

(5) Ethics. *Nicomachean Ethics* (ten books; additions from the *Eudemian Ethics* have been made in Books V-VII); *Eudemian Ethics* (a revision of the former by Eudemus: only Books I-III and VI preserved); *Magna Moralia,* the Greater Ethics (a compilation of the two preceding).

(6) Politics. *Politics* (eight books, apparently incomplete); *On the Constitution of Athens* (part of *Politics,* discovered 1890). The work on economics attributed to Aristotle is not authentic.

Complete edition of works by Bekker and Brandis; collection of fragments by Rose; translations appearing under editorship of J. A.

Smith and W. S. Ross. Index to works by Bonitz; Kappes, *Aristoteles-Lexikon.* Other translations: *Posterior Analytics* and *Sophistici Elenchi* by Poste; *Metaphysics* by Ross, Book I by Taylor; *Psychology* by Hammond, Hicks, Wallace; *Parva naturalia* by Beare and Ross; *Nicomachean Ethics* by Welldon, Peters; *Politics* by Welldon, Jowett (2 vols.), Ellis; *Constitution of Athens* by Kenyon; *Poetics* by Bywater, Butcher, Lane Cooper, Wharton; *Rhetoric* by Welldon. (Nearly all these works also in Bohn Library; in addition: *Organon* and *History of Animals.*) Burnet, *Aristotle on Education,* translations of parts of *Ethics* and *Politics.*

A. E. Taylor, *Aristotle;* E. Wallace, *Outlines of the Philosophy of Aristotle;* Grant, *Aristotle;* Grote, *Aristotle;* T. H. Green, *Aristotle,* in *Works;* Chase, *Ethics of Aristotle;* A. C. Bradley, *Aristotle's Theory of State* in *Hellenica;* Davidson, *Aristotle and Ancient Educational Ideals;* Jones, *Aristotle's Researches in Natural Science;* Siebeck, *Aristoteles;* Brentano, *Aristoteles und seine Weltanschauung;* Piat, *Aristote;* special works by Bernays (on theory of the drama), Maier (syllogism), F. Brentano (psychology).

Philosophy and the Sciences

Aristotle accepts the idealistic and teleological presuppositions of his teacher: the universe is an ideal world, an interrelated, organic whole, a system of eternal and unchangeable ideas or forms (*εἴδη*). These are the ultimate essences and causes of things, the directing forces or purposes that make them what they are. Ideas are not, however, detached from the world we perceive, but part and parcel of it, immanent in it; they give it form and life. Our world of experience is the real world, and not an untrustworthy appearance. Hence, it is the object for us to study and to understand; and experience the basis and starting-point of our knowledge, from which to rise to the science of ultimate principles. This conception of reality gives our philosopher, who was the son of a physician, his wholesome respect for the concrete and particular, accounts for his interest in natural science, and determines his method. Genuine knowledge (*ἐπιστήμη*), however, does not consist in mere acquaintance with facts, but in knowing their reasons or causes or grounds, in knowing that they cannot be otherwise than they are. Philosophy, or Science in the broad sense, embraces all such reasoned knowledge; it includes mathematics as well as the special sciences. The science or philosophy which studies the ultimate or first causes of things is called by Aristotle the first philosophy; we call it metaphysics. Metaphysics is con-

cerned with being as such; the different sciences, with certain parts or phases of being; physics, for example, with being in so far as it has matter and motion. These other, partial, sciences or philosophies are named second philosophies.

Aristotle further distinguishes between theoretical sciences (mathematics, physics, and metaphysics), practical sciences (ethics and politics), and creative sciences or arts (knowledge concerned with mechanical and artistic production). Of these, he takes up physics (physics, astronomy, biology, etc.), metaphysics, and practical philosophy, so that we have, if we add logic, the general division of Plato: logic, metaphysics, and ethics.

Logic.

The function of logic is to describe the method of reaching knowledge. Socrates and Plato had already laid the foundations of this study, but Aristotle was the first to work it out in detail, and to make a special discipline of it. He is the founder of scientific logic. He considers it an important instrument for the acquisition of genuine knowledge, and holds that we should not proceed to the study of the first philosophy, or the science of the essence of things, until we have familiarized ourselves with the *Analytics*. Logic, therefore, is an introduction or propædeutic to philosophy.

Its theme is the analysis of the form and content of thought, of the processes by which we reach knowledge; it is the science of correct thinking. Thinking consists in reasoning, or scientific demonstration, in deriving the particular from the universal, the conditioned from its causes. Inferences are composed of *judgments,* which, when expressed in language, are called *propositions;* judgments are made up of *concepts,* which are expressed in *terms*. Aristotle discusses the nature and different kinds of judgments, the various relations in which they stand to one another, and the different kinds of demonstration, defining and classifying these processes as they are still largely defined and classified in the text-books of formal logic to-day. Concepts do not receive exhaustive treatment in his logic; he does, however, deal with the concept in the narrow sense, that is, with definition and the rules of definition; and also with the highest concepts, or categories.

He devotes considerable attention to demonstration, which

is based on the syllogism,—a field neglected by Plato. He was the first, as Zeller says, to discover in the syllogism the basal form in which all thought moves, and to give it a name. The syllogism is a discourse (λόγος) in which from certain presuppositions (premises) something new (the conclusion) necessarily follows. In the syllogism the particular is derived from the universal: it is deductive reasoning. Induction consists in deriving a universal proposition from particular facts of experience: in order to be valid, the process must be complete or perfect, that is, based on knowledge of all the cases.

Valid or scientific demonstration is, therefore, always in the form of the syllogism: it is syllogistic and deductive. In order to be true, the conclusion must follow necessarily from the premises. And the premises themselves must be universal and necessary, hence they, too, must be proved, *i.e.*, grounded on other premises. The goal of knowledge is complete demonstration.* This is possible only in a series of syllogisms in which conclusions depend on premises which, in turn, are the conclusions of other premises, and so on. But the process cannot go on forever; we must finally reach propositions or principles which cannot be proved deductively, and which, nevertheless, have absolute certainty, greater certainty, indeed, than all the propositions derived from them. We have such direct or immediate, intuitive or self-evident principles (ἀρχαί), *e.g.*, the axioms of mathematics and the principle of contradiction. Each particular science has such principles of its own, and there are, besides, universal principles common to all the sciences, the principles of first philosophy, or metaphysics.

The basal notions or principles are inherent in reason itself (νοῦς), the highest part of the soul; they are direct intuitions of reason. They can also be verified by induction, the process in which thought rises from sense-perception, or the perception of individual things, to general concepts, or the knowledge of universals. Human reason has the power of abstracting from the particular its form, or that in which it agrees with other particulars of the same name. Such forms constitute the essences

* The ideal science in Aristotle's day was mathematics, hence the important rôle deduction plays in his logic. His aim was to reach the certainty of mathematics.

of things; they are real. They are, however, not only the principles or essences of things, but also principles of reason; being potential in the mind. Experience is necessary to bring them out, to make reason aware of them, to bring them to consciousness. That is, they are implicit in the mind and made explicit or actual by experience. They are both forms of thought and forms of reality itself. This is a basal idea of Aristotle's: thought and being coincide; truth is the agreement of thought with being.

Our knowledge, therefore, always begins with sense-perception and rises from particular facts to universal concepts, *i.e.,* from " that which is the better known to us " to " that which is the better known and more certain in itself." Universals are the last things we reach in our thinking, but first in nature: they are the first principles.

Hence, induction is a preparation for deduction. The ideal of Science must always be to derive particulars from universals, to furnish demonstration or necessary proof, which cannot be done until induction has done its work, until the universals lying dormant in our reason have been aroused by experience. In this way Aristotle reconciles empiricism and rationalism. Knowledge is impossible without experience; but truths derived from experience, by induction, would not be certain,—they would yield probability only,—hence they must also be *a priori,* implicit in the mind. Without experience, truths would never be known; without being implicit in reason, they would not be certain.

By the categories Aristotle means the most general forms of predication, the fundamental and most universal predicates which can be affirmed of anything. He enumerates ten, sometimes only eight, such categories. We can say of a thing *what* it is (man: substance), *how* it is constituted (white: quality), *how large* it is (two yards long: quantity), *how related* (greater, double: relation), *where* it is (in the Lyceum: space), *when* it is (yesterday: time), *what posture* or position it assumes (lies, sits: position), the *state* it is in (clothed, armed), what it *does* (burns: activity), and what it *suffers* (is burned: passivity). All this means that the objects of our experience exist in time and place, can be measured and counted, are related to other things, act and are acted on, have essential qualities and acci-

dental qualities. The categories are not mere forms of thought or language,—they are that, to be sure,—they are also predicates of reality as such: every word and concept has something real corresponding to it. The particular, perceivable substance is the bearer of all these categories, it is that of which they can all be predicated. Hence, the category of substance is the all-important one, the others exist only in so far as they can be predicated of substance. Science, therefore, deals with the category of being, or essence, or substance, *i.e.*, with the essential qualities of things. This leads us to Aristotle's metaphysics.

Metaphysics

The problem of metaphysics is the discovery of ultimate principles. How shall we explain the world, what is it in essence? Democritus and his school had reduced it to moving material atoms, Plato to transcendent ideas, which somehow influence formless matter. Aristotle rejects both answers, and seeks to mediate between them. The idea or form cannot be a self-existent essence, apart from matter, as Plato has it; a quality cannot exist apart from its object; there can be no form without matter. Nor can the changing reality perceived by us be explained by mere purposeless matter in motion, as the materialists hold; there can be no matter without directing purpose or form. Plato regarded the objects of concrete experience as mere incomplete copies of the universal idea, as accidents, and the form as the substance; Aristotle, on the other hand, regards the particular objects or individual beings as real substances. But the essence or true nature of the particular concrete being is constituted by its *form,* by the general qualities belonging to the class to which it belongs; so that, after all, the form, or idea, is for him, too, the most essential element.

The particular object, however, changes or grows; all that is perceived is changeable, it is and it is not, it can be and not be; it assumes now these qualities, now those, it is now seed, now sapling, now tree, now fruit. How shall we explain this process of becoming? There must be something that changes, something that persists in the change, something that has the different qualities of which we have spoken. This is matter (*ὑλη*): matter persists, matter itself cannot disappear. Matter must always have some qualities; we never experience a formless

matter, hence matter and qualities, or forms, exist together. So that when we say an object changes its form, we do not mean that the form itself changes or becomes different: no form, as such, can change into another form. Matter assumes different forms, a series of forms, one form following another; matter persists, the form it first had does not change into another form, but a new form fashions the matter. The different forms have always existed, they do not suddenly come into being. Hence, neither matter nor forms arise or disappear; they are the eternal principles of things. In order to explain change or growth, we must assume a substratum (matter) that persists and changes, and qualities (forms) which, though never changing, are responsible for the rich and growing world around us.

When a thing has reached its growth, it has *realized* its meaning, its purpose, or form: the form is its true being, its realization or completion (ἐντελέχεια). Its possibilities have been realized, that which was potential in it (δύναμις) has become actual (ἐνέργεια). Matter has taken on form; the acorn becomes an oak, the acorn is a potential oak; the oak is the realization of its potentiality, it is the form made manifest, real, actual. Aristotle, therefore, calls matter the principle of possibility, and form the principle of reality, or actuality. Only primary matter, however, formless matter, which we can think, but which does not exist as such, is mere possibility; concrete matter always has form, is, in a sense, actual. But it is a mere possibility as regards some other form or actuality: the seed is matter for the oak; the marble, matter for the statue.

In order, then, to explain our world of change we must assume forms and matter. Every form is, like the Platonic idea, eternal, but instead of being *outside of* matter, it is *in* matter: forms and matter have always coexisted; the universe is eternal. Form realizes itself in the thing; it causes the matter to move: an end or purpose is realized by the thing. An artist in producing a work of art has an idea or plan in his mind; he acts on matter through the motion of his hands, being governed in his action by his plan, and so realizes a purpose. We can distinguish four principles in this process, four kinds of causes: the idea or form (*that which is,* the statue in his mind), the formal cause; the matter (*that from which* the statue is made), the material

cause; the cause of the motion (*that through which* it is made), the efficient or moving cause; and the purpose or end (*that for the sake of which* it is made), the final cause. The same causes are at work in nature, particularly in the organic world; only, in nature the artist and his product are not separate, but one; the artist is in his work, so to speak. But the form or plan and the end or purpose really coincide: the purpose of the organism is the realization of its form. And the form or idea is, also, the cause of the motion, so that, after all, we have only two essential causes,—form and matter,—which constitute one indivisible whole, distinguishable only by thought.

Forms are purposive forces which realize themselves in the world of matter. Every organism becomes what it is through the action of an idea or purpose. There is a directing principle at work in the seed that makes it impossible for the seed to become anything but the plant or animal from which it came. Since forms are unchangeable, species are immutable; the species are constant, individuals pass away.

If all this is so, if form controls matter, which is potential form, how does it happen that nature so often fails of its mark; that it is so often incomplete, imperfect, and deformed? Aristotle lays the failures in nature to the imperfection of matter: matter, at this point, is no longer mere possibility, but offers resistance to the form, has power of its own; to its recalcitrancy are due the plurality and diversity of individuals expressing a type, the differences existing between male and female, as well as all the monstrosities and deformities in the world.

Motion or change is explained as the union of form and matter. The idea or form is what causes motion in matter; the idea is the mover, matter the thing moved. Motion is the realization of that which is possible as such. How is this brought about? By the mere presence of the idea; matter strives to realize the form, it is roused to action by the presence of the form, it has a desire for the form. And since form and matter are eternal, motion is eternal. Here the recalcitrant matter exhibits the opposite quality: a desire to move in the direction of the purpose; if this is not merely figurative language on Aristotle's part, we have here a survival of the old Greek hylozoism.

Such eternal motion on the part of matter logically presupposes, according to our philosopher, an eternal unmoved mover, something that causes motion, without itself moving. For if it itself moved, it would have to be moved by something else that moves, and so on *ad infinitum;* which would leave motion unexplained. Somewhere, motion must begin without being caused by something that moves. Hence, there is an eternal unmoved first mover, who is the final ground of all vital forces in nature. Since this first cause is unmoved, it must be form without matter, pure form, absolute spirit, for where there is matter, there is motion and change.

The first cause is absolutely perfect, and is the highest purpose or highest good of the world. God acts on the world, not by moving it, but as a beautiful picture or an ideal acts on the soul. All beings in the world, plants, animals, men, desire the realization of their essence because of the highest good, or God; his existence is the cause of their desire. Hence God is the unifying principle of the world, the center towards which all things strive, the principle which accounts for all order, beauty, and life in the universe. God's activity consists in thought, in the contemplation of the essence of things, in the vision of beautiful forms. He is all actuality; every possibility is realized in him. He has no impressions, no sensations, no appetites, no will in the sense of desire, no feelings in the sense of passions; he is pure intelligence. Our intellect is discursive, our knowledge piecemeal, moving along step by step; God's thinking is intuitive: he sees all things at once and sees them whole. He is free from pain and passion, and is supremely happy. He is everything that a *philosopher* longs to be.

Physics

Aristotle's physics, the science of bodies and motion, is characterized by its antagonism to the mechanical-atomistic view of Democritus. He rejects the attempt to explain all changes in the corporeal world quantitatively, as changes in the local relation of atoms. Matter, as we have already seen, he tends to conceive as passive and inert, and in this regard he agrees with Democritus, although he sometimes endows it with the qualities which hylozoism had ascribed to it. Empty space is denied along with atoms; and space is defined as the limit between a surrounded and a surrounding

body. Whatever is not bounded by another body, is not in space; thus there is no space beyond the fixed stars, because there is no body to limit them. Where there are no more bodies, space ceases to exist. Hence, there can be no infinite space, the world is finite; and it does not move as a whole, but only its parts suffer change. Since space cannot be conceived without motion and God does not move, God is not in space.

By motion (*κίνησις*) Aristotle means all kinds of change; with his teleological theory in mind, he defines it as "the realization of the possible," and enumerates four kinds of motion: substantial (origin and decay); quantitative (change in the size of a body by addition and subtraction); qualitative (transformation of one thing into another); and local (change of place), which conditions all the other kinds of change. The elements, of which there are four (sometimes five), according to Aristotle, can be transformed into one another; and the mixture of substances gives rise to a new substance. Qualities are not mere subjective effects of quantitative changes, as the Atomists hold, but real qualities of the things themselves. Changes in quality cannot, therefore, be explained mechanically, as mere changes in the local arrangement of atoms; there is an absolute change in quality, which is produced by forces acting on matter.

All these conceptions are directly opposed to the theories of natural science as they had been worked out by the Atomists. The difference is fundamental: for Aristotle nature cannot be explained mechanically; it is dynamic and teleological; it is active and nothing in it happens without purpose. Convinced of the truth of his metaphysical presuppositions, Aristotle often settles questions in science by declaring certain occurrences to be impossible, because inconceivable;—that is, inconceivable on the basis of his metaphysics. From the standpoint of mechanism, his conception represents a decidedly backward step in the progress of thought; but there are many natural scientists to-day who would subscribe to his dynamic or "energetic" interpretation of nature, and not a few who would accept his teleology.

The universe is eternal, subject neither to origin nor decay. The earth is in the center; around it, in concentric layers, are water, air, fire; then come the celestial spheres, which are composed of ether and some of which carry the planets, the sun,

and the moon; then the fixed stars. In order to explain the motion of the planets, Aristotle introduced a large number of counter-spheres or " backward-moving " spheres. God encompasses the outermost sphere of the fixed stars and causes it to move; by the motion of this sphere the movements of the other spheres are influenced. This idea, however, is not consistently carried out by Aristotle, each sphere also being supplied with a spirit to move it.

Biology

Aristotle may be called the founder of systematic and comparative zoölogy. As in his physics, so in his biology, he is opposed to the purely quantitative-mechanical-causal conception of nature; he subordinates it to the qualitative, dynamic, and teleological interpretation. There are forces in nature which initiate and direct movements; the form is dynamic and purposive, as we have seen, and it is the soul of the organic body. The body is an *organon* or instrument; instruments are intended for use, presuppose a user, a soul; the soul is that which moves the body and fixes its structure; it is the principle of life (vitalism). Man has hands because he has a mind. Body and soul constitute an indivisible unity, but soul is the controlling, guiding principle; that is, the whole is prior to the parts, the purpose prior to its realization; we cannot understand the parts without the whole.

Wherever there is life,—and there are traces of life all through nature, even in inorganic nature,—there is soul. Different grades or degrees of soul exist, corresponding to different forms of life. No soul can be without a body, and no soul without a specific body: a human soul could not dwell in the body of a horse. The organic world forms an ascending scale of bodies, from the lowest to the highest; and a graduated series of souls, from the plant soul, which governs the functions of nutrition, growth, and reproduction, to the human soul, which possesses additional and higher powers.

Psychology

Man is the microcosm and the final goal of nature, distinguished from all other living beings by the possession of reason (*νοῦς*). The soul of man resembles the plant soul in that it controls the lower vital functions, and the animal soul in the possession of faculties of perception, the so-called common sense, imagination, memory, pleasure and

pain, desire and aversion. Sense-perception is a change produced in the soul by things perceived, through the mediation of the sense-organs. The sense-organ is, potentially, what the perceived object is actually. The different senses inform the soul of the qualities of things; the common sense, whose organ is the heart, is the meeting-place, as it were, of all the senses; by means of it we combine percepts furnished by the other senses and obtain the total picture of an object. It also gives us a clear picture of qualities,—such as number, size, shape, motion, and rest,—which are perceived by every sense. The common sense also forms generic images, composite images, and has the power of retention or memory (associative thinking). The feelings of pleasure and pain are referred to perception; pleasure arises when functions are furthered, pain when they are impeded. These feelings arouse desire and aversion, which alone cause the body to move. Desire arises only on the presentation of a desirable object, of one considered by the soul as a good. Desire accompanied by deliberation is called rational will.

The human soul possesses, besides the foregoing functions, the power of conceptual thought, the faculty of thinking the universal and necessary essences of things; as the soul perceives sensible objects in perception, so, as reason (νοῦς), it beholds concepts. Reason is, potentially, whatever it can conceive or think; conceptual thought is actualized reason. How does reason come to think concepts? There is active or creative reason and passive reason. Creative reason is pure actuality; in it concepts are realized, it sees them directly,—here thought and the object of thought are one,—it is like Plato's pure soul, which contemplates the world of ideas. In passive reason concepts are potential (it is likened to Aristotle's matter: passive reason is the matter on which creative reason, the form, acts); they are made real or actual, or brought out, by creative reason. According to Aristotle's teaching, nothing can ever become actual for which an *actual* cause does not already exist. Thus, for example, a complete form or idea exists which the matter of a particular organism has to realize. Similarly, he assumes here, a complete form must exist in reason for reason to realize. In order to carry out this thought in the mental world, he distin-

guishes between the formal and material phases of reason, between active and passive reason, actual and potential reason: the concepts which are potential in passive reason are actual in creative reason.

Perception, imagination, and memory are connected with the body and perish with it. Passive reason, too, contains elements of sensuous images and is perishable. Such images are the occasion for the arousal of concepts in passive reason, but these cannot be aroused without the action of creative reason. Creative reason existed before soul and body; it is absolutely immaterial, imperishable, not bound to a body, and immortal. It is a spark of the divine mind coming to the soul from without (θύραθεν), as Aristotle says; it does not arise in the course of the soul's development, as do the other psychic functions. Since it is not an individual reason, personal immortality is evidently out of the question. Some interpreters of Aristotle identify it with universal reason or the mind of God.

Aristotle's metaphysics and psychology form the basis of his theory of ethics, which is the first comprehensive scientific theory presented in history. The question to be answered by it is the Socratic question of the highest good. All human action has some end in view. This end may be the means to a higher end, this to a still higher, and so on; but finally we must reach a supreme end or purpose, an ultimate principle or good, for the sake of which every other good is to be sought. What is this highest good? The goodness of a thing consists in the realization of its specific nature; the end or purpose of every creature is to realize or make manifest its peculiar essence, that which distinguishes it from every other creature. This for man is not mere bodily existence or mere sensuous feeling, the exercise of vegetable and animal functions, but a life of reason. Hence, the highest good for man is the complete and habitual exercise of the functions which make him a human being. This is what Aristotle means by the term eudæmonia (εὐδαιμονία), which has been translated by our word happiness, to which no objection need be raised if it is not taken as pleasure. Pleasure, according to Aristotle, accompanies virtuous activity as a secondary effect and is thus included in the highest good, but not identical with it.

Ethics

The soul, however, is not all reason, it has an irrational as well as a rational part: feelings, desires, appetites. With these reason should coöperate; in order to realize its purpose, the different parts of the soul must act in the right way and the body must function properly, and there must be adequate economic goods. (Neither a slave nor a child can attain the ethical goal; and poverty, sickness, and misfortune stand in its way.) A virtuous soul is a well-ordered soul, one in which the right relation exists between reason, feeling, and desire. The perfect action of reason as such is intellectual (dianoetical) efficiency or virtue (wisdom, insight); the perfect action of the emotional-impulsive function is called ethical virtue (temperance, courage, liberality, etc.). There will be as many moral virtues as there are spheres of action. We must assume a rational attitude toward bodily appetites, toward fear, danger, anger, the desire for economic goods, fame, and so on.

The question arises, In what does this attitude consist? In keeping the mean between two extremes (the doctrine of the golden mean *), we are told. Courage, for example, is a mean between foolhardiness and cowardice; liberality, between extravagance and avarice; modesty, between bashfulness and shamelessness. This mean is not the same for every individual and under all circumstances, it is "relative to ourselves," and it is "determined by reason, or as a right-minded man would determine it." It is not, however, a matter of subjective opinion or arbitrary choice; what moral conduct is, is decided by the right-minded man: the virtuous man is the standard and measure of things; he judges everything correctly, and the truth is manifest to him in every case. Two other points are to be remembered: Moral conduct implies a disposition (ἕξις) or a habit of the will; it is an expression of character: one swallow does not make a spring. Moreover, it is voluntary action, consciously purposive action, freely chosen action: "virtue, as well as the evil, lies in our power." Aristotle includes all these ideas in the following definition: "Virtue is a disposition, or habit, involving deliberate purpose or choice, consisting in a mean that is relative to ourselves, the mean

* This principle is frequently abandoned by Aristotle in his discussions, being inapplicable in many cases.

being determined by reason, or as a prudent man would determine it."

The highest good for man, then, is self-realization. This teaching, however, is not to be interpreted as a selfish individualism. A man realizes his true self when he loves and gratifies the supreme part of his being, that is, the rational part, when he is moved by a motive of nobleness, when he promotes the interests of others and serves his country. One has but to read Aristotle's books on friendship and justice in his *Ethics* in order to appreciate the exalted altruistic spirit of his teaching. "The virtuous man will act often in the interest of his friends and of his country, and, if need be, will even die for them. He will surrender money, honor, and all the goods for which the world contends, reserving only nobleness for himself, as he would rather enjoy an intense pleasure for a short time than a moderate pleasure long, and would rather live one year nobly than many years indifferently, and would rather perform one noble and lofty action than many poor actions. This is true of one who lays down his life for another; he chooses great nobleness for his own." The virtuous man is a lover of self in the sense that he assigns to himself a preponderant share of noble conduct. Man is a social being and disposed to live with others; he needs somebody to do good to. "A virtuous friend is naturally desirable to a virtuous man, for that which is naturally good is good and pleasant in itself to the virtuous man;" that is, loving goodness for its own sake, he is bound to love a virtuous friend; in this sense, his friend is a second self (an *alter ego*) to the virtuous man.

Justice is a virtue implying a relation to others, for it promotes the interests of somebody else, whether he be a ruler or a simple fellow-citizen. Justice is taken in two senses, lawfulness and fairness. Laws pronounce upon all subjects with a view to the interest of the community as a whole, or of those who are its best or leading citizens whether in virtue or in any similar sense. That is, all the virtues are here included in the notion of justice, only that in this case they are regarded from the standpoint of the general welfare. The term justice is also used in the more usual sense of giving each man his due (distributive justice).

Nor is the theory to be taken in the hedonistic sense, as a pleasure-theory. Pleasure is the necessary and immediate consequent of virtuous activity, but not the end of life. Pleasure is the completion of activity: it is something added, just as youthful beauty is added to youthful power. It is a concomitant of action, and "the activity will be pleasantest when it is most perfect, and it will be most perfect when it is the activity of the part being in sound condition and acting upon the most excellent of the objects that fall within its domain." It is reasonable to aim at pleasure, as it perfects life in each of us, and life is an object of desire. Pleasure and life are yoked together and do not admit of separation, as pleasure is impossible without activity and every activity is perfected by pleasure. Besides, according to Aristotle, it is the things which are honorable and pleasant to the virtuous man which are really honorable and pleasant. If people who have never tasted a pure and liberal pleasure have recourse to the pleasures of the body, it must not be inferred that these pleasures are preferable.

The highest happiness is the activity of the best part of our nature,—speculative activity, an activity which takes the form of contemplation. This is the highest, the most continuous, the most pleasant, in the highest degree self-sufficient, and loved for its own sake. Such a life may seem too good for a man. He will enjoy such a life not in virtue of his humanity, but in virtue of some divine element in him. "If then the reason is divine in comparison with the rest of man's nature, the life which accords with reason will be divine in comparison with human life in general. Nor is it right to follow the advice of people who say that the thoughts of men should not be too high for humanity or the thoughts of humanity too high for mortality; for a man, as far as in him lies, should seek immortality and do all that is in his power to live in accordance with the highest part of his nature." *

It is not enough to know the nature of virtue; we should endeavor to possess and exercise it. Theories are strong enough to stimulate youths already liberally minded, but they cannot inspire the mass of men to chivalrous action. It is difficult for

* Translations by Welldon.

one to receive from his early days a right inclination to virtue unless he is brought up under virtuous laws. We also need laws to teach us all the duty of life when we have come to man's estate, for most people are moved by necessity and fear of punishment rather than by reason and the love of nobleness. The State should undertake the nurture and the pursuits of its citizens. At any rate, whoever wishes to elevate the people should try to learn the principles of legislation. In order, therefore, that the philosophy of human life be made as complete as possible, Aristotle proceeds to examine the subject of politics, to which we now turn.

Man is a social being (*ζῶον πολιτικόν*), who can realize his true self only in society and the State. Families and village communities are prior to the State in time, but the State is the goal of the evolution of human life, and, as such, prior and superior to them and the individual *by nature,* on the Aristotelian principle that the whole is prior to its parts. That is, social life is the goal or end of human existence. The aim of the State, however, is to produce good citizens. We have here a reconciliation of the view that the individual is the end of life and the view that society is the end. Society is composed of individuals, and the purpose of society is to enable the individual citizens to live a virtuous and happy life.

Politics

The constitution of the State must be adapted to the character and requirements of a people. It is just when it confers equal rights on the people in so far as they are equal, and unequal rights in so far as they are unequal. Citizens differ in personal capability, in property qualifications, in birth, and freedom, and justice demands that they be treated according to these differences.

There are good constitutions and bad ones; the monarchy, the aristocracy, and the polity (a form in which the citizens are nearly equal) being good forms, and the tyranny, oligarchy, and democracy bad. As the best State for his own time, Aristotle regards a city-state in which only those are to be citizens whose position in life and education qualify them for government, that is, an aristocracy. He justifies slavery on the ground that it is a natural institution; it is just that foreigners,—and they alone

composed the slave-class in Greece,—being inferior to the Greeks, should not enjoy the same rights as Greeks.

Peripatetic School

The philosophy of Aristotle was continued by his pupils, many of whom showed independence of thought. Theophrastus (+287 B.C.), his successor as the head of the school, wrote a work on botany and a history of the doctrines of the "physicists." Eudemus is known by his history of mathematics and astronomy; Aristoxenus, by his studies in the theory of music; Dicæarchus, by his geography and politics; Strato (successor of Theophrastus in the school, from 287-269 B.C.) devotes himself to the philosophy of nature. After Lyco, who succeeded Strato (269-225) in the headship, the Peripatetic School lost its importance, and the writings of the master were neglected. In the first century B.C., the school turned its attention to text-criticism and interpretation, a work which was begun by Tyrannio and Andronicus of Rhodes, and carried on for many centuries. To this movement we owe the preservation and transmission of the Aristotelian writings.

ETHICAL MOVEMENT

11. The Outlook

The vital question for Socrates had been the practical problem: he conceived it as his mission to set his age right in matters of morals as well as in matters of truth. His interest in the problem of knowledge was connected with his conviction that clear thinking is essential to right action, and that it is possible to discover practical principles which will appeal to all reasonable men. With the Socratic schools, too, ethical questions were uppermost, although the Megarians also showed a fondness for dialectical discussions; and Plato's earlier writings breathe the ethical spirit of his master. Even in his developed system, the founder of the Academy never lost sight of the highest good; his entire philosophy constituted a rational basis for his ethical idealism. It is true that Aristotle exalted theoretical activity in his conception of God, but he, too, regarded the ethical personality as the noblest goal of the universe. After the death of Plato and Aristotle, their schools for the most part adhered to the teachings of the founders and made little progress in the development of thought; they were feeding upon the

intellectual legacy which had been bequeathed to them. The Cyrenaics and the Cynics were preaching their opposing ethical doctrines of hedonism and asceticism as before; and, influenced by the Cynic Diogenes of Sinope, the Megarian Stilpo turned his attention to ethical problems.

The social conditions which had assisted in the birth of the Socratic movement did not disappear with the death of its pioneer. The general moral tone of the times did not improve, the pursuit of enjoyment and gain was not checked, faith in the popular religion not strengthened. The long and frequent wars between the Grecian city-states broke the power of one after the other, and left Hellas an easy prey to the Macedonian conqueror. The Peloponnesian war (431-404 B.C.) ended in the complete overthrow of the political hegemony of Athens; the Corinthian war (395-387) broke Corinth; the Theban war (379-362) brought Sparta to defeat. After a long and stubborn struggle, Philip of Macedon defeated the allied Athenians and Thebans at the battle of Chæronea (338) and became the master of Greece. Alexander the Great conquered the Persians, and his generals divided a large part of the world between them after his death (323). From the hands of Macedonia the Greek was delivered into the hands of a new world-power: in 146 B.C. Greece becomes a Roman province.

Under the conditions we have been describing, it was only natural that the ethical question should again become paramount in many thoughtful minds. In times like these, in the midst of the breakdown of the old institutions and the general demoralization of public and private life, the problem of the meaning of life would not down. When the State lost its independence and civic duty degenerated into mere compliance, the question forced itself upon the intelligent individual how he might save himself. How shall the weary soul find rest? This is the old and ever new problem which conscious human beings put to themselves when life becomes too complex and difficult for them, and they are confronted with the danger of being lost in the struggle. It is the problem of value, the problem of the highest good: What is the thing of most worth in the world; how shall a man shape his life, what is there left for him to strive for? Different answers were given to the question by different groups

of thinkers, then as now. According to one school (the Epicureans), the highest good or ideal is pleasure or happiness (hedonism): this is the only goal worth while. Everything else has value only in so far as it brings pleasure, only in so far as it is a means to happiness. In the storm and stress of existence, it is the part of wisdom to keep the mind unruffled and to move through the world with the greatest possible advantage to oneself. According to another school (the Stoics), the thing of most worth is not happiness, but character, virtue, self-discipline, duty, the subordination of particular interests to universal ends.

The teachings of both schools were presented in more popular form and appealed to wider circles than the great systems of Plato and Aristotle. And yet both of them saw the need of offering a rational basis for their ethical conceptions, of justifying them to reason, of proving them. They believed that the moral question could not find a satisfactory answer without a knowledge of the very nature of things: unless we know the meaning of the world, we cannot tell how man ought to act in the world. His conduct will depend on the kind of universe he is living in; his theory of life will be determined by his theory of the world, his ethics by his *metaphysics*. With all their insistence on the practical, these schools never lost the Greek love of speculation.

In order to realize the highest good, then, it is necessary to have knowledge of the meaning of the universe, to know the truth. The question, however, arises, What is truth? What is the criterion of truth; and what is its origin? How can we know that we have the truth? Logic answers these questions for us; it furnishes us with a standard or criterion of knowledge, and enables us to distinguish truth from error. The Epicureans and Stoics, therefore, both grounded their philosophy of life on logic and metaphysics.

The Epicureans based their conception of the good on the mechanical materialism of Democritus, according to which the universe is the result of the interaction of countless material atoms, without purpose or intelligence to guide them. Man is one of the many combinations of jostling particles of matter, formed, in the ever-changing flow of existence, after many trials

and failures; he will last his little day, only to be scattered again into the great atomic whirl whence he came. Hence, while he lives, let him live untroubled by superstitious fears of the here and the hereafter; let him enjoy the few short moments of life as best he may, conducting himself so as to get as much happiness out of the game as it will yield. The Stoic philosophers, on the other hand, regarded the universe as held together and ruled by an intelligent principle or purpose, as a beautiful, good, and well-ordered cosmos. They saw unity and harmony in it; for them it is a living God. Since man is a part of this great rational whole, it is his duty to play his part as a part, to subordinate himself to the universal harmony, to subject his will to law and reason, to help realize the will of God. And all this he should do, not for the sake of his own narrow personal advantage, not for the sake of pleasure, but for the sake of the perfection of the whole. There was no happiness possible for the Stoic except that which he could obtain through obedience to the reason or law of the universe.

12. Epicureanism

The thinker with whose name hedonistic ethics became most intimately linked in antiquity was Epicurus. His metaphysical theory is almost entirely reproduced from the system of Democritus, which we have already studied. The essential features of his ethical doctrine had also been anticipated by Democritus, as well as by the Cyrenaic school.

Epicurus was born on the island of Samos, 341 B.C., of Athenian parents. Through his teacher Nausiphanes he became acquainted with the writings of Democritus and with the skeptical doctrines of Pyrrho. After teaching in various Greek cities, Epicurus he founded a school at Athens (306), where he lived quietly until his death (270), surrounded by an admiring group of pupils and friends, among whom were many women. No philosopher, perhaps, has been more unjustly reviled and misunderstood than this amiable and cheerful man whose very name has become a term of reproach.

Epicurus was a fertile writer, who published many works (one *On Nature,* consisting of thirty-seven books), only fragments of which remain. He summarized his system in forty-four propositions (a kind of catechism), the *κύριαι δόξαι,* the gist of which is given in Book X of the *Opinions* of Diogenes Laertius. His successors made very little

change in the system, their work consisting largely in reproducing his thought. His philosophy began to win many converts from the first century B.C. on. The most famous of his followers was the Roman poet Lucretius (94-54), who gave an exposition of the materialistic philosophy in his poem, *On the Nature of Things* (*De rerum natura*), and made it popular with many poets and literary men of the Augustan age.*

Of the writings we possess three letters (two of which are held to be authentic), the *κύριαι δόξαι* (which at least reproduce Epicurus's thought), and fragments. The Herculanean fragments are largely from his work *On Nature*. Collection of fragments in Usener's *Epicurea*, 1887, as well as in the general collections already mentioned.

W. Wallace, *Epicureanism;* R. D. Hicks, *Stoic and Epicurean;* A. E. Taylor, *Epicurus;* Pater, *Marius the Epicurean,* 2 vols., 1910; Joyau, *Epicure;* works on Epicurus's ethics by Guyau and P. von Gizicki. Good bibliography in Hicks.

The Problem

The object of philosophy, according to Epicurus, is to enable man to lead a happy life. Sciences that have no practical value, that do not help us to realize this purpose, like music, geometry, arithmetic, and astronomy, are useless. A certain knowledge of logic is necessary, enough to furnish us with a criterion of knowledge. We need to know physics, or a theory of the universe (metaphysics), in order to understand the natural causes of things. Such knowledge is useful, since it frees us from the fear of gods, natural phenomena, and death. The knowledge of human nature will teach us what to desire and what to avoid. The main thing, however, is that we understand that all things are produced by natural and not by supernatural causes. We may, therefore, divide philosophy into logic (Canonic), metaphysics, and ethics.

Logic

The problem here is to show how our propositions should be constituted in order to be true. What is the test (the Canonic, as Epicurus called it in his work entitled *Canon*) or criterion of their truth? They must all be based on sense-perception; what we hear and see and smell and taste is real, " just as real, just as evident as pain." Unless we trust our sensations, we can have no knowledge at all. Illusions are not illusions of the senses, but of judgment: sensations or the copies of objects are falsely interpreted or referred to the wrong objects, owing to many causes, such as differences in sense-organs, changes in the copies on their way to the organ. Mis-

* Transl. by Munro. See Santayana, *Three Philosophical Poets.*

takes, however, can be corrected by repeating the observation and appealing to the experiences of others.

General ideas or images have the same certainty as the sensations on which they depend. There are, however, no abstract qualities corresponding to such ideas, no independent essences (as Plato and Aristotle taught); the only reals corresponding to an idea are the particular concrete objects of the class, for which the general idea is a mark.

In addition to sensations and ideas, we also form opinions and hypotheses. In order to be true, these must be confirmed or verified by sense-perceptions, or at least not contradicted by them. Thus, our theory of atoms is an hypothesis; no one has ever seen an atom, and it is doubtful whether any one will ever see one. But we form an idea of the atom in analogy with our common experiences, and assign to it only such qualities as our sense-perception reveals in connection with larger bodies.

In the theoretical field, then, sensation is the criterion of truth; we know what we perceive; and we imagine, and have a right to imagine, that the things we do not perceive are like the things which we do perceive. Epicurus rests his entire proof of the trustworthiness of sensations on the Democritean theory of sense-perception. What is directly perceived is not the objects themselves, but copies of them, which are detached from objects and influence the sense-organ. Hence, his theory of truth stands and falls with the assumed theory of sensation. In the practical field, pleasure-pain is the criterion. Only what causes pleasure is good; only what causes pain is bad. Here, too, illusion is due to false judgments concerning these feelings, and can be avoided.

Now, our senses show us nothing but material bodies, hence bodies alone are real. But if bodies alone existed, there would be nothing in which they could be contained or across which they could move; hence there must be empty space, "intangible nature," or non-being. Since nothing can be absolutely created or destroyed, the origin, growth, change, and disappearance of bodies can only be explained as the combination and separation of elements. These elements are exceedingly small particles of matter, imperceptible

Metaphysics

tible, physically indivisible, indestructible, and unchangeable. (They are not infinitely divisible, or infinitely small in the mathematical sense; if they were, everything would be reduced to nothing.) They exist by their own force, as Epicurus says, and are absolutely full, *i.e.,* there are no empty spaces in them; they are absolutely hard and impenetrable, they cannot be broken or cut (hence called atoms). Besides these qualities, atoms have size, shape, and weight, in which they differ, one from another, and are in a continual state of motion. Differences in bodies are explained by differences in the size, shape, weight, and relation of atoms. The number of shapes, however, is limited, according to Epicurus. Since there is an infinite number of atoms, there must be an infinite space to hold them, *i.e.,* an infinite universe.

On account of their weight, atoms move downward in perpendicular lines, at equal rates of speed. But if they simply moved downward in this way, we should have nothing but a constant rain of atoms and no world. We must, therefore, imagine that they have the power to swerve just the least bit from the perpendicular, " just as all living creatures have the power to go forward whither the will leads each," as Lucretius puts it. That is, Epicurus endows his atoms with spontaneity, partly in order to explain the existing world, partly to make possible free will in man: without such power of free action in atoms, freedom would be impossible in us, since nothing comes from nothing; and the notion of freedom is less disturbing to man's peace of mind than blind fate or inexorable necessity.

Living beings, too, are explained by the same principles; originally they arose from the earth. At first monsters were produced, shapes not adapted to their surroundings, but these could not live. The heavenly bodies are accounted for in the same natural way; they are not the creations of gods. Nor are they endowed with souls, for such cannot exist outside of living forms.

There are gods, but not as the people conceive them in their fear and ignorance. That they exist is proved by the common belief in them,—it is a natural idea,—and by the necessity of assuming a cause for this idea in us. But the gods did not create this world; why should supremely happy beings make

a world? Besides, whence could they have derived the idea of such a world? Finally, how could such perfect beings make so imperfect a world? The gods have the shapes of men, only they are more beautiful; their bodies are fine bodies of light; they live in the *intermundia*. They differ in sex, require food, and even speak the Greek language. They do not care for men or interfere with the course of the world, but live peaceful, blessed lives, free from care and trouble.

Psychology

The soul is material like all other things; otherwise it could do nothing and suffer nothing. It is composed of extremely fine, minute, round, and, therefore, nimble, atoms; of fire, air, breath, and a still more refined and mobile matter, which is the very soul of soul. It is diffused over the whole body; whatever sensation the latter has, it owes entirely to the presence of the soul. There is a directing or rational part, which is seated in the breast (emotions, fear, joy), and whose will and inclination the rest of the soul obeys. The soul is mortal; when the body is dissolved, the soul is dissolved into its elements and loses its powers. When we are convinced that consciousness ceases with death, death loses its terrors for us; there is nothing to fear of a life to come, for death ends all. Lucretius says: "A fool will not make more out of the hereafter than he has made of this life."

Sense-perception is explained, with Democritus, by idols or images or thin film-like forms, which emanate from the objects around us and influence the sense-organs. Illusions, hallucinations, dreams, and similar states are produced by images of objects which no longer exist, or by images which adhere to one another, or in other perfectly natural ways. Will is explained thus: an image (of walking) presents itself to the mind (the rational part); when the mind wills (to walk), it strikes the force of the soul which is spread over the whole body; the soul strikes the body, and the body moves.

Ethics

Man's nature is bent upon pleasure; yes, all animals from the moment of their birth seek pleasure and avoid pain by a natural instinct. Pleasure, therefore, is the goal at which we all aim, and, indeed, ought to aim: happiness is the highest good. Every pleasure, as such, is good, every pain bad. But we should exercise prudence in the choice

of our pleasures. If one pleasure lasted as long as another and were just as intense, one would be just as good as another. If the things which give the debauched men pleasure could give them peace, we should not blame them. But this is not the case. Not every pleasure is worthy of being chosen, not every pain ought to be avoided. Some pleasures are followed by pains or by loss of pleasures; many pains are followed by pleasures, and are, therefore, better than some pleasures. Moreover, pleasures differ in intensity. Mental pleasures are greater than the pleasures of the body, mental pains worse than physical pains. For the flesh is sensible only to present affliction, while the soul feels the past, present, and future. Not only is mental enjoyment greater than physical, but physical enjoyment is not possible without mental. Hence Epicurus declares that it is the part of wisdom to choose the joys of intellectual life. The reason for this is plain. We are afraid of the catastrophes of nature, of the wrath of the gods, of death and the hereafter; we worry over the past, present, and future. So long as we do this, we cannot be happy. To rid ourselves of our fears, we should seek to understand the natural causes of things, that is, study philosophy. "It would not be possible for a person to banish all fear about those things which are called most essential, unless he knew what is the nature of the universe, or if he had any idea that the fables told about it could be true; and therefore it is that a person cannot enjoy unmixed pleasure without physiological knowledge" [knowledge of nature].

We can obtain pleasures by satisfying a desire or by having no desire. Pleasure accompanying the satisfaction of a desire, like hunger, is not pure, but a mixture of pleasure and pain; pure pleasure ensues when a desire has been satisfied and disappears, when we no longer desire. Freedom from pain is the highest measure of pleasure; it cannot be intensified. Hence, desire that aims beyond this state is immoderate.

To be free from trouble and fear, we should know the causes of things, and what pleasures to follow and what to avoid; in other words, be prudent. And if we are prudent, we will be virtuous, we will obey the rules of morality, for no one can be happy without living prudently, honorably, and justly. Virtue, then, or morality, is a means to an end: happiness or repose

of spirit; it is not an end in itself, but, like the art of healing, a means; we praise it and exercise it for its utility. But happiness cannot be realized by a life of sensual enjoyment and debauchery; it is bound up with the same virtues that Plato and Aristotle and the Stoics recommended: wisdom, courage, temperance, and justice.

Social life is based on the principle of self-interest; individuals join together in groups for self-protection (contract theory). There is no such thing as absolute justice: so-called natural rights are rules of conduct which men agree to follow on account of their utility. All laws and institutions are just only in so far as they make for the security of the individual, that is, when they are useful. Certain rules have been found by experience to be necessary wherever men live together in society, which accounts for certain universal laws; but laws also differ in different countries according to conditions.

Politics

We are just because it is to our advantage to be just; there is nothing evil in injustice as such, but to fall into the hands of the judge and to live in constant fear of punishment, that is an evil. Since participation in public life does not contribute to happiness, the wise man will avoid it as much as possible.

Though the pleasure-theory of Epicurus is not a doctrine of sensuality, it is easy to understand how many of its followers came to interpret it as such in order to suit their own desires for a life of luxury and sensuous enjoyment. If pleasure is the highest good for each individual, then what gives him pleasure is good. If he prefers the pleasures of sense to the higher pleasures, if he can rid his mind of superstitious fears without leading an intellectual life, without philosophy, and attain the repose of spirit, who can gainsay him? "The quantity of pleasure being equal, push-pin is as good as poetry," to use Bentham's phrase. Epicurus preferred poetry and science and virtues, and so did Atticus and Horace and Lucretius; but "for every Atticus and every Horace there were a hundred Catilines and a hundred Verres." * The truth is, the Epicurean philosophy is essentially a doctrine of enlightened self-interest. The individual is asked to make his own happiness the goal

* Denis, *Histoire des théories et des idées morales.*

of all his strivings, and such a theory of life is apt to lead to selfish disregard of others.

See Lecky, *History of European Morals,* vol. I; Friedländer, *Die Sittengeschichte Roms,* 2 vols.

13. Stoicism

Zeno and his School

Opposed to the materialistic, hedonistic, and egoistic conception of the world and of life is the philosophy taught by Socrates, Plato, and Aristotle. After the death of the great leaders, the essential elements of their theory of life were presented in popular form by the Stoics, a school founded by Zeno, around 300 B.C., at Athens, which had many followers in Greece and Rome, and continued its existence far into Christian times. Zeno shows the influence of the Cynics and Megarians, as well as of Plato and Aristotle. Cynic ethics he frees from its narrowness and places on a logical and metaphysical foundation. He makes use of Platonic and Aristotelian notions in modified form, but refuses to conceive form and matter as different in kind, and returns to the hylozoism of Heraclitus.

Zeno was born 336 B.C. in Citium, Cyprus, a Greek city with a large foreign, perhaps Semitic, population. He came to Athens, 314, and studied under Crates the Cynic, Stilpo the Megarian, and Polemon of the Academy, all of whom had influence on his teachings. In 294 he opened a school in the Stoa Poikile (the painted corridor or porch), from which the doctrines represented by him received their name. Zeno was esteemed for the nobility of his character, the simplicity of his life, his affability, and moral earnestness. He died 264 B.C.

Zeno was followed in the leadership of the Stoic school by his pupil Cleanthes (264-232 B.C.), who does not seem to have possessed the qualities needed to meet the attacks of the Epicureans and Skeptics. His successor in office (232-204) was Chrysippus of Soli, Cilicia, a man of great ability, who clearly defined the teachings of the school, gave unity to the system, and defended it against the Skeptics. Among the pupils of Chrysippus were Zeno of Tarsus, Diogenes of Babylon, Antipater of Tarsus. Stoicism, as developed by Chrysippus, found favor in Rome during the Republic, Panætius (180-110) being one of its first Roman adherents of note. During the Empire, it divided into two sections, the one popular, represented by Musonius Rufus (first century A.D.), Seneca (3-65 A.D.), Epictetus (first century), the Emperor Marcus Aurelius (121-180); the other scientific, whose sole aim was to preserve intact and interpret the old doctrine. Corinthus and Herocles, whose work on *Ethics* was recently discovered, belong

to this branch. We shall offer the Stoic philosophy as it was worked out in the course of the development of the Greek school, limiting ourselves to the most important phases of it.

Of the old Stoa (304-205 B.C.) and Middle Stoa (down to the Roman Empire) we have no primary sources except the *Hymn of Cleanthes* and numerous quotations in later works. We have to depend for our knowledge of the teachings on the secondary sources, especially Diogenes Laertius, Stobæus, Cicero, Plutarch, Simplicius, and Sextus Empiricus, from whom we may learn the spirit of this philosophy, though we are unable to distinguish with certainty between the respective contributions of the leaders. Of the later Roman Stoa we have numerous Greek and Latin writings. In addition to the collections of fragments already mentioned, consult: J. von Arnim's collection, 3 vols.; Pearson, *Fragments of Zeno and Cleanthes;* Diels, *Doxographi Græci.*

Translations of Epictetus, *Discourses* (with Encheiridion and fragments), by Long, Higginson; of Marcus Aurelius, *Meditations,* by Long. Lecky, *History of European Morals,* vol. I; Hicks, *Stoic and Epicurean;* Arnold, *Roman Stoicism;* Bussell, *Marcus Aurelius and the Later Stoics;* Watson, *M. A. Antoninus;* Barth, *Die Stoa,* 2d ed.

Hatch, *Influence of Greek Ideas and Usages on the Christian Church;* Hirzel, *Untersuchungen zu Cicero's Philosophie* (Part II, pp. 1-566 on Stoics); Weygold, *Die Philosophie der Stoa;* Schmekel, *Philosophie der mittleren Stoa;* Heinze, *Lehre vom Logos,* etc.; Ogerau, *Système philosophique des Stoiciens;* Bonhöffer, *Epiktet und die Stoa, Die Ethik des Stoikers Epiktet,* and *Epiktet und das neue Testament;* Dryoff, *Ethik der alten Stoa.* Susemihl, *Geschichte der Litteratur in der Alexandrinerzeit;* Wendland, *Hellenistisch-römische Kultur.* Good bibliography in Hicks.

The goal of the Stoic philosophy is to find a rational basis for ethics. We cannot understand the meaning of the good unless we have a criterion of truth and a theory of the universe, that is, unless we study logic and metaphysics. The Stoics compared philosophy to a field, of which logic is the fence, physics the soil, and ethics the fruit.

Logic

We begin with logic, which is the science of thoughts and discourses, *i.e.,* of concepts, judgments, and inferences, as well as of their expression in language. The Stoics included grammar in logic, and are the founders of our traditional science of grammar. We shall limit ourselves to the so-called dialectical part, which deals with the theory of knowledge and discusses two main problems: What is the origin of knowledge, or how do we reach truth? and, What is the criterion of knowledge?

Our knowledge is gained through perception. There are no innate ideas, as Plato holds; the soul is at birth an empty tablet, a *tabula rasa,* which receives the impressions of things, as a

wax tablet receives the impression of the stamp. Chrysippus speaks of sensation as a modification of consciousness. Impressions persist and form memory-images, which, when combined, constitute experience. From sensation and images general ideas are formed, which, when based on common experiences and derived naturally, are called common notions (*notitiæ communes*). They are the same in all persons, and not subject to illusion or error. Scientific concepts, however, are produced consciously and methodically, being the result of voluntary reflection.

Sense-perception is the basis of all our knowledge. The mind has the faculty of forming general ideas, of comprehending in concepts a large number of particular cases according to their likeness, and of forming universal judgments on the basis of the same. This faculty is called reason (λόγος), and is a faculty both of thought and of speech. It is identical, in essence, with the universal reason which fashions the matter of the world according to its thoughts. It is owing to this that the human mind can reproduce the thoughts of God, and thus conceive the world. But in order to be true, concepts must agree with the divine thoughts which express themselves in the qualities of the world. The Stoics opposed the Platonic doctrine of ideas, regarding universals as subjective abstractions, and holding that only particular objects have real existence.

Our knowledge, therefore, rests on perceptions and on the general ideas and concepts derived from them. A sense-image is true when it is an exact copy of the object. But percepts and concepts may be false; many of our ideas evidently do not give us truth; some of them are delusive. How can we distinguish the true from the false? What shall be our criterion? How can we tell whether there really is anything corresponding to our ideas? How do we know that they are not merely the creations of our own fancy? All our knowledge is based on perception. In order to be true, a percept must be accompanied by the consciousness or immediate conviction that there is a real object corresponding to it, that it agrees with the object. This consciousness will appear when the subject has convinced himself that the sense-organ is in normal condition, that the percept is clear and distinct, and that repeated observations

by himself and others verify the first impression. A sensation that carries such conviction with it is called by Zeno a conceptual impression, or, as some translate it, the apprehending presentation.

The criterion of knowledge, then, is the self-evidence of the impression or concept, the feeling of conviction that there is a reality corresponding to it. Some of our concepts compel such a feeling, some of them do not. Merely subjective or imaginary ideas are not accompanied by this consciousness. We need not give our assent to such ideas, or pronounce judgment where conviction is absent, hence we ourselves are responsible for error; judgment here is an act of free will. We cannot, however, deny assent to a conceptual impression or idea.

Knowledge of truth is not the exclusive possession of science or philosophy. All men share in knowledge through their general ideas. But such common notions do not carry conviction with them, as does genuine knowledge (ἐπιστήμη), which is acquired by reasoning. Science is an organized body of true judgments, in which one proposition is deduced from another by logical necessity. The faculty of drawing correct inferences, therefore, is another means of reaching truth, and dialectics an essential qualification of the Stoic sage. The Stoics consequently gave considerable attention to formal logic, particularly to the doctrine of the syllogism, which they regarded as its most important phase; they also made additions to the Aristotelian logic and revised the table of categories.

The main purpose of the Stoic logic was to show that the mind cannot create knowledge out of itself, that the source of all our knowledge is perception; that this furnishes the materials of knowledge. The Stoics did not, however, deny the activity of thought; indeed, they insisted that knowledge is advanced by reflection on experience, by organizing the raw material into concepts, by forming judgments concerning it, by drawing inferences and passing from that which is directly given to the remote in time and place, from the particular to the universal.

The Stoics agree with Aristotle that everything that exists results from two principles, a principle that acts, moves, and forms, and a principle that is acted on, moved, and formed, from an active and a passive principle. And they agree with him also

that these two things are not separate entities, although they may be distinguished in thought, but united in one reality. They differ from him, however, in their notion of the nature of the principles. For them nothing is real that does not act or is not acted on; and since only bodies are active and passive, form or force and matter are both corporeal. These, however, differ in the degree of their corporeality, if we may so express it; force consists of a finer kind of stuff, while matter, as such, is coarse, formless, and immovable. The two are inseparable, as we have said; there is no force without matter and no matter without force: matter is everywhere permeated with force. Everything in the world is corporeal, the human soul and God included. Even qualities are corporeal, consisting of a pneumatic substance (*πνεῦμα*), which is a mixture of fire and air, and making each particular object what it is. Fire and air are active elements, the principles of life and mind; water and earth are passive elements, as such inert and lifeless, clay in the hands of the potter. The pneumatic substance pervades every particle of matter; it does not merely fill the spaces between the molecules, but is present in every smallest piece of reality and continuous throughout the universe. Each particular thing has qualities which distinguish it from every other thing; they owe their existence to the material forms penetrating the body.

Metaphysics

Only forces have causality, and causes can act only on bodies. But the effect is always incorporeal; a cause produces a *state* in another body, a movement or a change, which is neither a body nor a quality of a body, but a mere state of the body. Causal action and force are here identified; causal action can be exercised only on a body; the effect, however, which results is not a cause or force, but a mere accidental state of the body. If the effect were a body, the force would have produced another body, which is impossible. Relations, too, are incorporeal. The active principle, however, let it be remembered, is alive, intelligent; in this respect the Stoics approximate to the Aristotelian conception. From their sensationalistic standpoint, they simply refuse to conceive it as pure form or spirit. Their metaphysics is the Platonic-Aristotelian philosophy translated back into hylozoism.

The forces in the universe form one all-pervasive force or fire (Heraclitus), and this principle is rational, the active soul of the world. It must be *one,* because the universe is a unity, because all its parts are in harmony; it is conceived as fire, because heat produces everything and moves everything, is the giver of life. It is reason,—intelligent, purposeful, and good,—because the universe is a *cosmos,* a beautiful, well-ordered, good, and perfect whole (teleological argument). All life and movement have their source in it: it is God. It is related to the matter of the world as the human soul is related to its body: the world is the body of God, a living organism. It is the soul or logos (λόγος) of the universe; in it are contained all the germs or seeds (*spermata*) of life; in it the whole cosmos lies potential, as the plant in the seed. This is pantheism.

The universal reason or soul pervades the whole world, just as the human soul is everywhere present in the body. But just as the governing part of the soul is situated in a particular place or center, so the ruling part of the world-soul, the Deity, or Zeus, is seated at the outermost circle of the world, whence it spreads through the world. The two parts, however, form one single godhead, one of them assuming the form of the world, the other retaining its original shape. God, the father of all things, the perfect and blessed being, has prevision and will, is a lover of man, benevolent, cares for everything, punishes the wicked and rewards the good. In these respects the Stoic God is like the God of theism. But there is a difference. He is not, after all, taken as a whole, a free personality, a free creator of the world, but, as we have seen, the substance from which everything proceeds with the necessity of a process of nature. The Stoics assign will and forethought to him, but they likewise identify him with necessary law. The fact is these notions are not consistently carried out; pantheism and theism dwell together in the system, unconscious of one another, as in many modern systems.

The Stoics offer a detailed description of the evolution of the world from the original divine fire. Air, water, and earth arise from fire; the divine principle, however, permeates the lower elements. (It seems that the lower elements, earth and water, are condensed

Cosmology

forms of fire, the active principle; that is, fire that has lost its force: matter is a waste-product.) The divine element itself differentiates into forms of varying degrees of purity, acting in inorganic nature as blind causality, in the vegetable kingdom as a blind but purposive natural force, in animals as a purposive impulse guided by ideas, in man as rational conscious purpose. Natural objects are explained as combinations of the four elements; their differences, partly as differences in mixture, partly as differences in the formative action of the divine fire. The universe is a perfect sphere floating in empty space, held together and animated by its soul. It arose in time and will return to fire, to pure life and rationality, whence it came (the great conflagration), only to pass through the same cycle, again and again, world without end. But every recurring world will resemble its predecessors in every detail (*palingenesis*), for each is produced by the same law. Everything is absolutely determined, even the human will; the universe forms an unbroken causal chain; nothing happens by chance; everything follows necessarily from the one first cause or mover. Man is free in the sense that he can assent to what fate decrees, but, whether he assents or not, he must obey. Yet, in so far as the law and reason of the world, and the necessity following from it, has its source in the will of God, everything is under the will of God or divine Providence. That is, whatever evolves from the original principle is in accordance with the divine purpose; it is the realization of a potential purpose of God. In this sense, Fate and Providence are not opposed: fate or law is the will of God.

The question arises, if everything is a manifestation of God, how shall we explain the existence of evil in the world? The Stoics sometimes denied the existence of evil: the world is good and perfect, the so-called evils in it are only relative evils; like shadows in a picture or discords in music, they are necessary to the beauty and perfection of the whole; or they are means of realizing the good. Sometimes they regarded evil (*e.g.*, disease) as the inevitable consequence of nature, as necessary evil. Besides, since physical evil cannot affect human character, it is not really evil. As for moral evil, it is impossible to have the tendency to virtue without its opposite; moreover, virtue

grows strong in combating it. The truth is, the universe is a beautiful, good, and perfect whole, in which every part has its own proper place and purpose.

Psychology

Man is composed of body and soul; the soul is a material substance, a spark of the divine fire. It is nourished by the blood. The ruling part, which is situated in the heart, exercises all the psychic functions: perception, judgment, inference, feeling, and will; it becomes rational, in the course of time, acquiring the power of conceptual thought. Man is free in so far as he has logical thought; he is not merely governed by images and impulses, like the brute, but deliberates and chooses only such acts as gain the assent of reason. A man is free when he acts in accordance with reason, that is, in obedience to the eternal laws of nature. There is, therefore, no conflict between what the wise man wills to do and what nature commands. The philosopher in possession of the complete system of truths is as free as God himself.

There are different Stoic doctrines of immortality; according to some members of the school, all souls continue to exist until the end of the world, according to others only the wise and virtuous souls persist. But all souls reappear with the recreation of the universe (palingenesis). Man is the end or purpose of nature, that is, of God.

Ethics

On the theories set forth in the foregoing pages, the Stoics based their ethical philosophy. They conceived the universe, not as a mechanical-causal series, but as an organized rational system, as a beautiful well-ordered whole, in which every part has its function to perform with respect to the whole, and in which all things work together for the good of the whole. It was for them a harmonious unity with a ruling purpose, a living, intelligent God. Man is a part of the universal order, a spark of the divine fire; he is the microcosm, his own nature being identical with that of the All. Hence it behooves him to act in harmony with the purpose of the universe, to seek to realize the purpose of his own being in the divine purpose, to reach the highest possible measure of perfection. In order to do this, he must put his own soul in order; reason should rule in him as reason rules the world. And he ought to subordinate his will to the will of the world,

submit to the law of the universe, take his place in the great order, and strive to do consciously, intelligently, and voluntarily what it is his office to do as a member of the cosmos.

This is what the Stoic means by demanding that we live according to nature, for living according to nature is for a human being to act in conformity with reason, or the logos, or to live a good life. Virtue is, therefore, the highest good and the highest happiness, for only a virtuous life can be a happy life. And to live thus is to realize oneself; for to realize one's true self is to serve the purposes of universal reason and to work for universal ends. This implies a universal society of rational beings with the same rights; for reason is the same in all, and all are parts of the same world-soul.

The same conclusions may be reached by a consideration of the natural impulses of man; for, according to the Stoics, the universal logos expresses itself in the lower instincts no less than in human reason. Every being strives to preserve itself; hence pleasure is not the goal of impulse, but merely a concomitant of its successful realization. Nor is the preservation of the individual the goal, for there is native to all living creatures an instinct to preserve the species, a desire of something beyond themselves. With the development of reason man comes to regard his rational nature as his true self, and finds satisfaction in the perfection of reason and the promotion of rational purposes everywhere. What he loves in himself, he cannot but love in others. By this is not meant that theoretical speculation is an end in itself for Stoicism; reason is so highly valued because it reveals to us our duty.

Virtue, therefore, is the only good and vice the only evil, all else is indifferent in comparison with the ideal; health, life, honor, wealth, rank, power, friendship, success are not in themselves good; nor are death, disease, disgrace, poverty, humble birth in themselves evil. Neither is pleasure or happiness good as such, an absolute good; it is a consequent of action and should never be made the end. Such things are not in our power; but how we shall act with respect to them is in our power. Their value depends on what use we make of them, on their bearing upon our character; in themselves they are nothing. Virtue alone can make man happy.

A truly virtuous act is one that is consciously directed toward the highest purpose or end, and is performed with conscious knowledge of moral principles. That is, virtuous conduct implies complete and certain knowledge of the good and a conscious purpose, on the part of the doer, to realize the supreme good. To act unconsciously and without knowledge is not virtue. If we look at the matter in this way, virtue is *one,* for here everything depends on the disposition, on the good will: a man either has it or he has it not; there is no middle ground; he is either a wise man or a fool. In this sense, where one virtue is, all are. The virtues are expressions of one and the same disposition and, therefore, inseparably connected with one another. (Chrysippus did not accept this view.) Virtue is not a natural possession of man, but acquired by practice and through instruction. Inasmuch as virtue implies complete knowledge, only a mature man can have it. The assumption here is that a man will act according to his judgment, that he will naturally strive for what appears good to him, and avoid what is evil. Hence, evil conduct is the result of wrong judgment, or false opinion: this the Stoics regard sometimes as the cause, sometimes as the effect, of the passions or immoderate impulses, impulses that overshoot the mark. There are four such passions (πάθη): pleasure, desire, fear, and grief. A false judgment of a present good arouses (or is aroused by) pleasure; of a future good, desire; of a present evil, pain; of a future evil, fear. All these passions and their different kinds are diseases of the soul, which it is our business to eradicate, not merely to moderate; quite naturally, for they are irrational, exaggerated feelings: passion is false opinion. Freedom from passion or apathy is, therefore, the Stoic ideal. In order to realize it, complete knowledge is necessary, and such knowledge is connected with strength of will or character. To be free from passion means to be brave and temperate. It lies with the individual himself, however, whether he will obey the moral law or not; the will is free. In their metaphysics, the Stoics teach determinism; in their ethics, free will.

As we have already shown, the ethics of the Stoics is not egoistic. Man has not only the impulse of self-preservation, but the social impulse, which leads him to an ever-extending group-

life. The promptings of the natural instinct are made fully conscious and verified by rational thought; reason teaches that we are members of a cosmic society of rational beings toward whom we have duties (justice and benevolence). This society is a kind of universal State, in which there is but one law, one right (natural law, natural right), because there is but one universal reason. In this universal State morality is the sole test, the sole standard of discrimination between citizens; here gods and sages are the privileged individuals, whom, however, every one is free to join. All men are related, all are brothers, children of the same father; they have the same origin and destiny; the same universal reason speaks in them all; they stand under one law and are citizens of one State; even our enemies are entitled to our help and pardon. Reason demands that we place the universal welfare, the common good, above our own particular interests, that we sacrifice ourselves for it if need be, for in realizing the universal good we are fulfilling our true mission and preserving our true selves. This is the Stoic cosmopolitanism.

Politics

Unlike the Epicureans, who held themselves aloof from public affairs, the Stoics recommended participation in political affairs: it is the duty of every man to take part in social and political life in the same spirit in which he behaves as a citizen of the world, to labor for the welfare of his own people and his own State. But they could never become narrow chauvinists; their nationalism was broadened by a humanitarianism that embraced the entire world. The laws of the particular states must be rooted in the universal law and justice of the universal State; natural right is the basis of the positive law. Friendship and marriage were also highly prized by them, as, indeed, were all forms of social life in which the individual might learn to subordinate himself to a universal ideal.

True religion and philosophy are one, according to the Stoics. They were defenders of the popular religion, regarding the universal recognition which it received among mankind as a proof of its truth. It appeared to them, likewise, as a necessary support of morality. They objected, however, to the superstitious and anthropological elements in this religion and offered an allegorical interpretation of it,—

Religion

the first systematic attempt which had been made in this direction.

Piety is the knowledge and worship of the gods: it consists in forming an adequate conception of them and imitating their perfection. Submission to the universal will, or resignation, constitutes the true essence of religion.

Résumé of Greek Ethics

Common to nearly all the Greek theories of morality is the ideal of order, harmony, symmetry: man should subject himself to the rule of reason, control himself, keep measure in all things. Materialists and idealists agree, also, on the importance of intelligence: right action depends on correct thinking. Nor is any difference made by the opposing schools between the kind of conduct conducive to a good life; the fundamental virtues,—wisdom, self-control, courage, and justice,—are recommended by the refined hedonists and their opponents alike. And they are at one that by living a life of virtue, by being wise, moderate, brave, and just, man attains happiness, repose of spirit, peace of mind. The difference is: the hedonists declare we should follow virtue for the sake of happiness, while the ethical idealists regard a well-ordered, beautiful soul as good in itself, as something worthy of attainment even if it did not bring happiness. All prize kindness to fellow-men, friendship, benevolence, brotherhood; and both Stoics and Epicureans widened the circle of sympathy to include all mankind. But Epicurus tended to base it on self-interest (in theory): we cannot be happy unless we are at peace with our surroundings. The Stoics, on the other hand, made love of neighbor a good in itself: my fellow-man is not a mere means to my happiness, but, so far as I am concerned, an end in himself.

In the value which it placed on man as such, the ethical philosophy of Stoicism even transcended that of Plato and Aristotle. Both of these moralists defend slavery and both are influenced by national prejudices; both look upon "barbarians" as inferior peoples and upon slavery as a natural and just institution. The ideal of universal brotherhood and equality was not theirs. They preached justice and equal rights for all full-fledged and equal citizens of the State, and held that the State

was made for peace and not for conquest. But the citizens they had in mind were always free and intelligent Hellenes. It was not until the loss of Greek independence and the conquest of the so-called barbarians by Alexander that the idea of universal brotherhood and equal rights for all rational human beings began to dawn on some minds; and this ideal was preached by the Stoics. The solidarity of the human race became a central thought in their system. The notion of the dignity of man developed: the idea that all rational beings are children of the same father and citizens of the world, having the same rights and the same duties, subject to the same law, the same truth, and the same reason. The value of a man depends not on wealth, or rank, or class, but on his moral worth, on the good will. "Virtue despises no one, neither Greek nor barbarian, man nor woman, rich nor poor, freeman nor slave, wise nor ignorant, whole nor sick." * Character is the supreme test, and this no one can give and no one can take away.

14. Skepticism and Eclecticism

Skeptical School

The philosophical movements which we have been discussing, though chiefly interested in the ethical problem, offer comprehensive systems of metaphysics and attempt to prove the competence of human reason to reach truth. In this respect they follow in the footsteps of the great thinkers after Socrates, who had defended knowledge against the attacks of skepticism and had restored the faith of thought in itself. But the time seemed ripe again for another period of negation. Contemporaneously with Stoicism and Epicureanism and, as a kind of shadow to their dogmatism, there appeared a new philosophy of doubt. It was preached by Pyrrho of Elis and called Pyrrhonism, a name which has become a synonym of skepticism.

Pyrrho (365-270 B.C.), who studied Democritus in his youth with a pupil of the great Atomist, and became acquainted with the Eleatic-Megarian teachings, did not write anything, but his views were set down by Timon of Phlius (320-230), of whose satires (Σίλλοι) only fragments remain. After Timon the skeptical school was absorbed by the Platonic Academy, and did not emerge again as an independent

* Denis, *Histoire des théories et des idées morales.*

movement until the Academy purged itself of skepticism. Arcesilaus (315-241) was the first of the leaders of the Academy to give up the traditional doctrine and to devote himself to the criticism of Stoicism and Epicureanism, which he regarded as pseudo-philosophies. He trained his pupils in dialectics, or the art of proving and disproving every thesis. He regarded suspension of judgment with respect to metaphysical problems as the ideal. The greatest skeptic in the Academy was Carneades (213-129), who, like his predecessor, wrote nothing; he was followed by Clitomachus (+110), Philo of Larissa (+80), and Antiochus of Ascalon (+68).

The Academy (called Middle Academy during the skeptical period) purged itself of skepticism under the headship of Philo of Larissa and Antiochus; and skepticism again became an independent movement under the leadership of Ænesidemus, at the beginning of the Christian era, and was later represented by Sextus Empiricus (active from 180-210 A.D.). Ænesidemus wrote a work on Pyrrhonism, fragments of which are preserved by Sextus, and Sextus Empiricus wrote *Against the Mathematicians* and *Pyrrhonic Hypotyposes.*

Edition of fragments of Timon of Phlius by Wachsmuth.

Maccoll, *Greek Sceptics;* Patrick, *Sextus Empiricus;* Robertson, *Short History of Free Thought;* Goedeckemeyer, *Geschichte des griechischen Skepticismus;* R. Richter, *Der Skepticismus in der Philosophie,* 2 vols.; Stäudlin, *Geschichte des Skepticismus;* Kreibig, *Ethischer Skepticismus;* Brochard, *Les sceptiques grecs;* Waddington, *Pyrrho et Pyrrhonisme.* See also Hirzel and Schmekel, cited on p. 105.

Doctrines of the School

The thought common to this school is that we cannot know the nature of things. Our senses tell us only how things *appear* to us, not what they are in themselves. If sensation is the source of all our knowledge, how can we know whether objects agree with sensations or not, since we never get outside of our sensations? Moreover, our thoughts and sensations conflict, and we have no criterion here for distinguishing the true from the false (Pyrrho). The Epicureans regard every sensation as a criterion of truth, the Stoics say it is only the sensation carrying conviction with it that commands our assent; but, in neither case, is the criterion a safe one. It deceives us constantly; percepts that have nothing corresponding to them may be just as clear and distinct and self-evident as true ones (Arcesilaus). We cannot tell whether a sensation is a true copy of the real object, because we never have the object with which to compare it. Besides, we cannot assent to an idea, we can assent only to a judgment, and judgment is already thinking, and is in need of a criterion (Carneades). Carneades also declares that we cannot prove anything.

To prove anything, we must either assume the premise from which the truth follows, which is begging the question, or we must try to prove the premise by basing it on other premises. But, in this way, we never reach a stopping-place, and our conclusion can never attain certainty.

If we cannot know anything, we ought to suspend judgment, that is, assume nothing at all. All we can say is that we have such and such states of consciousness, that an object *appears* white or black, not that it *is* white or black. And this will be sufficient for all practical purposes (Pyrrho). Certain knowledge is also out of the question in moral matters, and here too we ought to suspend judgment. We can save ourselves much unhappiness if we do this and cease striving for ideals. Peace of mind will be the result of such an attitude of resignation (ἀταραξία). Carneades, however, holds that although we have no criterion for knowing the nature of things, we have sufficient certainty, *e.g.*, the clearness and vividness of a percept, to guide us in our practical behavior. There are various degrees of probability; it is not necessary, therefore, to suspend judgment. The wise man will assent to an idea according to its degree of probability; he will, however, always remember that the highest degree of probability does not guarantee truth. This view of Carneades led to eclecticism, or the philosophy of common-sense.

Carneades attacks the system of the Stoics, endeavoring to bring out the contradictions contained in it and to show the futility of all knowledge. He repudiates their teleological argument for the existence of God on the ground that the world is not rational, beautiful, and good; even if it were, it would not prove that a God made it. Their conception of God or the world-soul is criticised on the ground that if he has sensation or feeling, he is changeable, and that a changeable God cannot be eternal. If, on the other hand, he is unchangeable, he is a rigid, lifeless being. Again, if God is corporeal, he is changeable and perishable; if he is incorporeal, he has not sensation or feeling. If he is good, he is determined by the moral law, hence not supreme; if he is not good, he is inferior to men. The idea of God is full of contradictions; our reason cannot grasp him, knowledge of him is, therefore, impossible.

Philo of Larissa declares that, though the Stoic criterion of truth is not adequate, it does not follow that knowledge is impossible. He does not believe that either Arcesilaus or Carneades ever intended to deny the possibility of knowledge. Antiochus abandons skepticism and takes up eclecticism.

The skeptical view is worked out, in greater detail, by the later skeptics, Ænesidemus and Sextus. Among the reasons given by Ænesidemus for the uncertainty of knowledge are these: The same objects seem different to different beings, to different persons, to the same person, to different senses, to the same sense at different times and under different conditions of the subject and the environment. Every sensation is conditioned by subjective and objective factors, and is therefore never the same. Proofs are also offered against the possibility of proof, against the notion of cause and effect, and against the arguments for the existence of God.

Later Skeptics

The skeptical movement was not without influence on the history of philosophy. It tended to weaken the extreme dogmatism of some of the schools and induced others to modify their views. By pointing out the differences and contradictions in and among various systems, it caused thinkers to soften the differences and to emphasize the agreements, and to select from the different systems what appealed to their common-sense. In this way the philosophical movement called eclecticism took its rise.

Eclecticism was also encouraged by the growing intellectual intercourse between Greek scholars and the Romans. The Romans had no genius for philosophy; they lacked speculative power and paid little attention to theories of the world and of life. It was not until Macedonia was conquered by Rome in 168 B.C. and Greece became a Roman province (146), that interest arose in philosophical reflection. Greek teachers came to Rome and young Romans attended the philosophical schools in Greece; and Greek philosophy began to be regarded as an indispensable part of higher culture. The Roman thinkers, however, never produced an independent system of thought; they were eclectics, taking from different systems what most appealed to them. Even when they accepted a system as a whole, they modified it to suit their taste. They had no

Eclecticism

patience with subtleties, sophistries, and paradoxes, and avoided the hair-splittings and fine distinctions in which the Greeks reveled; nor were they fond of controversies and disputations. They were not profound thinkers, but were governed by common-sense: "they sought and found in philosophy," as Denis * says, "nothing but a rule of conduct and a means of government."

Eclecticism made its way into nearly all the schools, into the Academy, the Lyceum, and the Stoa; the Epicureans alone remaining true to their creed. We mention among its representatives: Antiochus, of the Newer Academy; Panætius (180-110 B.C.), Posidonius (+91 B.C.), of the Middle Stoa; Cicero (106-43 B.C.), the school founded in Rome by Sextius (born 70 B.C.), L. Annæus Cornutus (first century A.D.), L. Annæus Seneca (3-65 A.D.), C. Musonius Rufus (first century A.D.).

RELIGIOUS MOVEMENT

15. Jewish-Greek Philosophy

We have passed in review the different philosophical movements which succeeded the great systems of Plato and Aristotle, and come now to a period in our history when philosophy seeks refuge in religion. Epicureanism, interpreting the world as a machine, advises its followers to turn it to their use and to derive as much happiness from it as they can. The Stoics, conceiving it as an intelligent teleological system, find it wise to subordinate themselves to the universal will and to assist in realizing the purpose of the whole. Skepticism, refusing to give any answer whatever, advises the abandonment of all attempts to understand the universe and recommends, as a guide in practical matters, the following of nature, custom, and probability. Eclecticism, finally, turns its attention to what seems good in all the theories that have been offered, and endeavors to piece together a satisfactory world-view from the old materials at hand.

Philosophy and Religion

These philosophies, however, did not satisfy all types of mind. Some temperaments found it impossible to look upon the world

* *Histoire des théories et des idées morales.*

as a mechanical interplay of atoms and to cease from troubling about God. Nor were they able, by silencing their yearnings and resigning themselves to the universal will, to find peace and power "within their own pure hearts." And in spite of the Skeptics, they did not succeed in rooting out the desire for certain knowledge of God; they refused to surrender themselves to the fate of blindness—they longed not only to know but to see God. Zeller characterizes the period we have reached in the following words: "The feeling of estrangement from God, the yearning for a higher revelation, is characteristic of the last centuries of the old world. This yearning expresses nothing less than the consciousness of the decline of the classical peoples and their culture, and the premonition of the approaching new era; it brought to life not only Christianity, but, even before its advent, pagan and Jewish Alexandrianism and its kindred phenomena." *

This attitude gave rise to a philosophy strongly tinctured with religious mysticism; and Greek thought, gathering together the achievements of its intellectual history, ended, as it began, in religion. The religious movement was encouraged by the contact of Greek speculation with the Egyptian, Chaldæan, and, particularly, Jewish religions. The cosmopolitan city of Alexandria, in Egypt, furnished the favorable physical medium for bringing the two forces together. We may distinguish three currents in this religious philosophy: (1) An attempt to combine an Oriental religion (Judaism) with Greek speculation: Jewish-Greek philosophy; (2) an attempt to construct a world-religion upon Pythagorean doctrines: Neopythagoreanism; (3) an attempt to make a religious philosophy of the Platonic teaching: Neoplatonism. Common to all these theologies, or theosophies, are: the conception of God as a transcendent being, the dualism of God and world, the idea of revealed and mystical knowledge of God, asceticism and world-denial, the belief in intermediary beings, demons, and angels. Some of these elements were characteristic of the Jewish religion, as it appeared at the time we have reached (monotheism, dualism, revelation and prophecy, angelology), and it, therefore, readily lent itself to an amalgamation (syncretism) with certain Greek systems of thought.

* Zeller, *The Philosophy of the Greeks*, Part III, vol. II.

All the systems represent a union of Hellenistic and Oriental culture: in Neoplatonism the Greek element predominates, in the Jewish-Greek philosophy Orientalism is strongest.

See Lecky, *History of European Morals,* vol. I; Cumont, *Oriental Religions in Roman Paganism;* Gibbon, *Decline and Fall of Roman Empire.*

Beginnings of Jewish-Greek Philosophy

Alexandria, which was founded by Alexander the Great, 333 B.C., became, under the rule (323-181) of the descendants of his general Ptolemy, the leading commercial and intellectual city of the world, and the chief meeting-place of Hellenic and Oriental civilization. Here a great scientific Museum with its celebrated library (700,000 volumes) was established, under Ptolemy II (285-247), which attracted poets, men of science, and philosophers from every region of the classical world.* Here, under Ptolemy II, the sacred Jewish Scriptures were translated into Greek (the Septuagint) for the benefit of the large Jewish population who had forgotten their mother-tongue. The Greek influence on Jewish thought was, however, not limited to Alexandria, but extended to Palestine itself, as we know from the efforts made by King Antiochus IV to hellenize the Jews and from the encouragement he received from the educated classes of Jerusalem.

The first direct trace of the union of Jewish and Greek ideas is found in a treatise by a Peripatetic Jew named Aristobulus (about 150 B.C.), who wrote a commentary on the Pentateuch. He tried to show a harmony between the teachings of the Old Testament and the Greek philosophers, and asserted that the Greeks (Orpheus, Homer, Hesiod, Pythagoras, and Plato) had drawn upon the Jewish Scriptures for their knowledge. In support of his position he appealed to a number of verses in the Greek poets, which were afterward proved to be forgeries. He also attempted to get rid of the anthropomorphism in the Scriptures by means of allegorical interpretations (after the fashion of

* Among them: the poets Callimachus, Theocritus, and Apollonius of Rhodes; Euclid the mathematician; the astronomers Apollonius of Perga, Arystillus, Timocharus, and Ptolemy, the author of the *Almagest* and the geocentric or Ptolemaic theory of the heavens; and the geographer Eratosthenes.

the Stoics), aiming to reconcile it with Hellenic thought. God is conceived as a transcendent being; invisible; no mortal soul ever beheld him, he is visible only to pure intelligence (νοῦς). The world-soul (of the Stoics) is not God himself, but the divine Power that governs all things. The influence of Aristotle and the Stoics is plainly noticeable here. Traces of Greek philosophy are found in other Jewish writings, *e.g.*, in the work called *Wisdom of Solomon,* in the *Book of Maccabees, Sibylline Oracles,* and *Wisdom of Sirach.*

These tendencies culminate in the system of Philo, an Alexandrian Jew of priestly family, who was born 30 B.C. and died 50 A.D. He wrote historical, political, ethical, and exegetical works, of which many are extant. Ac- Philo cording to Philo, Judaism is the sum-total of human wisdom. One and the same Reason speaks in Greek philosophers, Pythagoras and Plato, and in the inspired teachings of Moses and the Prophets; to prove this, Philo read Greek philosophy, especially Platonism and Stoicism, into the Scriptures by means of the allegorical method which was in common use at Alexandria. Adam stands for spirit or mind, Eve for sensuality, Jacob for asceticism, and so on.

New edition of Philo's works by Wendland and Cohn; translation of works by Yonge, 4 vols.

Drummond, *Philo-Judæus;* Conybeare, *Philo;* Schürer, *History of the Jewish People;* Pfleiderer, *History of Philosophy of Religion;* Heinze, *Lehre vom Logos;* Réville, *Le logos;* Arnim, *Quellenstudien zu Philon;* Falter, *Philon und Plotin.*

The fundamental conception in the system of Philo is the idea of God. God is an absolutely transcendent being, so far above us that we cannot comprehend him or define him, the ineffable one, who is higher than knowledge, virtue, and the highest good. We know *that* he is, not *what* he is; we are immediately certain of his existence, knowing him through our highest reason or pure intelligence (νοῦς). His existence can, however, also be proved. He is the ground and source of everything; everything is contained in him. He is absolute power, absolute perfection, absolute goodness, absolute blessedness, and pure mind, intelligence, or reason. God is too exalted to come in contact with impure matter. In order to explain his action

on the world, Philo assumes intermediate powers or instruments, making use of the Jewish notion of angels and demons, and of the Greek conception of the world-soul and ideas. Sometimes he describes these powers as properties of God, as ideas or thoughts of God, as parts of the universal power or reason, sometimes as messengers or servants of God, as souls, angels, or demons; thinking at times in terms of Greek philosophy, at others in terms of the Jewish religion. All such powers he combines into one, the Logos, the Divine Reason or Wisdom. (We conceive the Logos through the logos in ourselves, which is a second faculty of knowledge, different from pure intelligence or νοῦς.) It is the container or place of all ideas (as the soul of the builder contains the plan of the city), the power of all powers, the highest of the angels, the first-born Son of God, the image of God, the second God, the God-man, the heavenly Adam. In fact, Philo's Logos is the Stoic world-soul, the former of the world, the pattern of the universe, or the Platonic world of ideas, made into a being intermediate between God and the world. Sometimes he speaks of this principle as a radiation of the divine light, a conception which faintly anticipates the emanation-theory of Plotinus. Whether or not the Logos is to be conceived as a person, is left uncertain.

The Logos is the wisdom and power and goodness of God substantialized, or conceived as an entity distinct from him. In order that it may have something to act upon, another principle is brought in: quality-less matter or a mass occupying space, of which God is the cause. From this chaotic mass, and using the Logos as his organ, God fashioned the world of visible things, which are the images or copies of ideas. We know the sensible images of the Logos, or the world of sense, through sense-perception, which is a third faculty of knowledge in man. The world has had a beginning in time, but has no end (Jewish conception of creation). Time and space were created when the world was created. Since the Logos is perfect and good, the defects and evils of the world must owe their origin to matter.

Man, like the universe, is soul and matter; he is the microcosm, the most important piece of creation. But pure thought (νοῦς) constitutes his chief essence. The body and the irrational part of the soul belong to the world of matter; the ruling part con-

sists of desire, courage, and reason (logos). The incorporeal mind or pure intelligence is added to the soul from above; this makes man an image of God. The body is the source of evil in man; the incorporation of souls is a fall: by its union with the body the soul becomes predisposed to evil (original sin). If the fallen souls fail to free themselves from sense, they enter other mortal bodies. Although human intelligence is in constant connection with the divine mind, according to Philo, it is nevertheless free to declare for or against God, free to lose itself in sensuality or to rise above it; how this is possible, we are not told. Man should deliver himself from his body, the evil principle in him, eradicate his passions and all sensuality, by theoretical contemplation (asceticism). But we cannot do this unaided, we are too weak for that, too sinful; we need help, divine help. God must illuminate us, penetrate our souls. " The sun of consciousness must set." This is ecstasy. In this state we immediately apprehend God, plunge ourselves into the pure source of being, see God (mysticism).

16. Neoplatonism

Pythagoras lived in the sixth century B.C. The object of his teaching was chiefly ethical, political, and religious; it aimed at an ethical-religious reform. After his death, the practical phases of his doctrine survived, particularly in Italy, but the school, as a philosophical organization, died in the fourth century. Plato absorbed the Pythagorean number-theory and the religious-mystical elements, during his old age, and his immediate successors in the school emphasized these latter-day teachings of the master. With the rise of Aristotelianism and the later Greek systems, the Academy abandoned Pythagoreanism as its official creed. The Pythagorean secret societies, however, with their mysteries, continued to lead a somewhat precarious existence until the religious yearning which took possession of the Roman world, in the first century B.C., revived them and the spirit of the times encouraged them to devote themselves once more to philosophy. The leaders in this movement, however, did not go back to the Pythagoreanism of the early days; they took the doctrine as it appeared in Pla-

Neopythagoreanism

tonism, and combined it, in the eclectic fashion of the age, with other Greek theories. Pythagoras came to be regarded as the source of divinely revealed knowledge. Whatever the Neopythagoreans accepted as truth, and whatever appealed to them in the writings of Plato, Aristotle, and the Stoics, they naïvely ascribed to the great teacher whose personality and work had been surrounded with the nimbus of mystery.

Among the names to be mentioned here are those of P. Nigidius Figulus, Sotion the pupil of Sextius, Apollonius of Tyana, Moderatus, of the first century A.D., and Nicomachus and Philostratus of the second century. Apollonius declared Pythagoras to be the world-savior, while Philostratus gives this title to Apollonius himself. The Neopythagorean movement also influenced many Platonists, *e.g.,* Plutarch of Chæronea (50-125), Maximus of Tyre, Apuleius (born around 126-132), the physician Galen (second century), Celsus, Numenius, and others.

Translation of Philostratus, *Life of Apollonius,* 1903. Works on Apollonius by F. Campbell, Whittaker, Mead.

Neoplatonism

The attempts to construct a religious philosophy on the basis of Greek thought culminate in Neoplatonism. Plato's system becomes the framework for a religious world-view, or theosophy, which utilizes whatever seems valuable in the other theories, especially in Peripatetic and Stoic speculation, in an independent manner. God is conceived as the source and goal of everything; from him everything comes, to him all things return; he is the alpha and omega, the beginning, middle, and end. Communion with God or absorption in God, therefore, is the real object of all our strivings, and religion the heart-beat of the universe.

A number of stages may be distinguished in the school: (1) The Alexandrian-Roman school, to which belong: Ammonius Saccas (175-242 A.D.), the founder, who left no writings; Plotinus (204-269), who develops the system; and Porphyry (232-304), his pupil; (2) The Syrian school, represented by Jamblichus (+330); and (3) The Athenian school, of which Plutarch the younger (350-433) and Proclus (411-485) are the chief figures.

A. Harnack, article on "Neoplatonism" in *Britannica,* and *History of the Dogma;* Bigg, *Neoplatonism,* and *Christian Platonists of Alexandria;* Whittaker, *The Neoplatonists;* R. M. Jones, *Studies in Mys-*

tical Religion; Hatch, cited p. 105; Dill, *Roman Society in the Last Century of the Western Empire;* A. Drews, *Plotinus und der Untergang der antiken Weltanschauung;* works of Susemihl and Heinze, cited p. 105; Matter, Simon, Vacherot; also works on p. 123.

Plotinus was born in Lycopolis, Egypt, in 204, and studied philosophy under Ammonius Saccas in Alexandria for eleven years. In 243 he went to Rome, where he established a school; but he did not put his philosophy in writing until he was fifty years old. After his death (269), his pupil Porphyry revised and published his manuscripts, with a biography of his teacher, arranging them in six Enneads, or series of nine writings each. This work has come down to us. Plotinus

Edition of works by Volkmann; translations of selections by Thomas Taylor, now in Bohn Library.

God is the source of all existence, of all oppositions and differences, of mind and body, form and matter, but is himself devoid of all opposition and difference, absolutely one, one in the sense of excluding all plurality and diversity. He is the One that contains everything,—infinity, the first causeless cause,—from which everything is produced, from which everything emanates; for plurality always presupposes unity; unity is prior to all being and beyond all being. (He is so transcendent that whatever we say of him merely limits him; hence we cannot attribute to him beauty or goodness or thought or will, for all such attributes are limitations and really imperfections.) We cannot say what he is, but only what he is not. We cannot define him as being, for being is thinkable, and what is thinkable implies subject and object, and is, therefore, a limitation. He is higher than beauty, truth, goodness, consciousness, and will, for all of these depend on him. We cannot conceive him as thinking, because this implies a thinker and a thought; even a self-conscious being, who thinks himself, divides into subject and object. To say that God thinks and wills is to limit him by what he thinks and wills, and, therefore, to rob him of his independence.

Although the world is from God, he did not create it, for creation implies consciousness and will, or limitation, and God did not decide to create a world. Nor is the world an evolution from God, for God is the most perfect. The universe is an emanation from God, an inevitable overflow of his infinite power

or actuality. Plotinus employs several similes to make his meaning clear. God is an infinite spring from which the stream flows without exhausting its infinite source; or, God is the sun from which the light radiates without loss to the sun. He uses these illustrations to indicate the absolute power and independence of the first principle. The cause does not pass over into, or lose itself in, its effect; the effect does not limit the cause; the effect is non-essential so far as God is concerned. The world depends on God, but he does not depend on the world. The animal continues as it was, after having given birth to offspring.

The farther we are from the sun, the nearer we are to darkness (matter). Creation is a fall from the perfect to the imperfect. The farther down we go in the scale of being, the greater imperfection, plurality, change, and separation we find. Every later stage is the necessary effect of the preceding one,—its copy, its shadow, its accident. But every later stage also strives for the higher, turns back to its source, finds its purpose or goal in that which went before.

Different stages may be distinguished in the process of emanation: pure thought or mind (*νοῦς*), soul, and matter. On

Three Stages of Being

the first stage, God's being divides into thought and ideas, that is, God thinks thoughts, he contemplates the pure ideal cosmos (*κόσμος νοητός*). Thought and its ideas, subject and object, are, however, one at this stage, not separate in time or space: in the divine mind the thinker and his thoughts are one and the same. This is as it should be if God's thinking is to be perfect truth, for truth implies the oneness of thought and its object. God thinks his own thoughts, which flow from his very essence: in the divine mind the activity of thought, the thinker, and the thought are one and the same, not separate. His thought is not discursive, passing from idea to idea, from premise to conclusion, but intuitive, static, as it were, contemplating the system of ideas as a whole, and all at once. There are many ideas,—as many as there are particular things in the phenomenal world,—and they differ from one another, but they form a unified system, as with Plato. The absolute unity of the first principle (God) is reflected in this *system* of many different ideas.

For each particular object in the sense-world, there is an

MATTER = EVIL = PRIVATION

idea in the mind of God. Hence, pure thought is the pattern or model of the phenomenal world; it is a spaceless and timeless, a perfect, eternal, and harmonious intelligible world. But it is not merely a pattern; the ideas are efficient causes; every stage in the process of emanation is, as we have seen, the cause of the succeeding one.

The soul (*ψυχή*) is the second stage in the divine emanation, and proceeds from pure thought; wherever there are ideas or purposes, they must seek to realize themselves, to produce something. It is the effect, image, or copy of pure thought, and, like an effect or copy, less perfect than the original. It is supersensuous or intelligible; it is active and has ideas; it possesses the power of thought, though in less complete form than pure thought, being discursive; it is self-conscious, though beyond the need of perception and memory. There are two phases of the soul: it is turned in the direction of pure thought, and it is turned in the direction of the world of sense; in the former case, it acts as thought: it contemplates pure ideas; in the latter, it is impelled to bring order into matter: it has desire. The first phase Plotinus calls the world-soul, the second phase he calls nature; and sometimes he speaks as if there were two such world-souls: the second emanating from the first like a ray of light, and constituting the unconscious soul of corporeal existence. As soul having ideas, looking mind-ward, it is indivisible; as soul with the desire to animate the objects of the phenomenal world, it is capable of division.

But the soul cannot realize its desire to exercise its powers, to act and to form, without something to act on; it produces matter. Matter, as such, has neither form, quality, power, nor unity; it is absolute impotence and privation, the principle of evil. It is farthest removed from God; there is no trace in it of God, it is darkness. We can form no image of it; all we can do is to assume it as the necessary substrate behind the phenomena of changing qualities, as that which persists in our passing world of sense. Upon this matter the efficient powers or souls which are contained in the world-soul and identical with its ideas, act, fashioning it into a sensuous image or copy of the intelligible world contained in the divine intelligence. These particular powers or souls which impress themselves upon matter,

as it were, thus producing particular sensible objects in space and in time, are themselves all comprehended in the indivisible world-soul; neither they nor the world-soul exist in space or are spread out; the spatial arrangement of objects is due solely to the matter in them. The beauty, order, and unity of the phenomenal universe are due to the world-soul, which harks back to God.

Plotinus conceives the emanation of the world from the world-soul as a necessary consequence of its nature, not as a process that has begun in time, in response, say, to an act of will. The three stages: the emanation of the world-soul, the creation of matter, the forming of matter into bodies, constitute one process, which abstract thought can analyze into three phases, but which are one eternal and indivisible act. With Aristotle, therefore, Plotinus teaches the eternity of the universe. At the same time, he tells us that matter can receive its forms only successively, and that the world-soul creates time in order that it may operate. He likewise accepts the Stoic doctrine of periodical recurrence. How these views are to be reconciled, he does not say: the general thought he seeks to impress is that the world has always been and always will be, and that the world of sense, as a whole, is eternal, though its parts change.

The soul of man is a part of the world-soul, and as such supersensuous and free. Originally, before its incorporation, it contemplated the eternal νοῦς in mystical intuition, it pointed God-ward and knew the good; but it turned its gaze earth-ward, body-ward, and so fell. This fall is in part the necessary consequence of the world-soul's desire to fashion matter, partly the result of an irresistible impulse for a life of sense on the part of the particular soul itself. In this way the soul has lost its original freedom, for its freedom consists in turning in the other direction, away from sensuality, in accordance with its higher nature. If it fails to do this, that is, if it remains steeped in the bodily life, it becomes attached to another human, animal, or plant body after death, according to the degree of its guilt. The part of the soul which radiates into the material body, however, is not the real self, but merely a shadow of it, the irrational, animal part of the soul, the seat of the appetites and sense-perception, the source

Human Soul

of sin and even of virtue. The true self consists of thought (νοῦς) and logos; it can realize its mission only by turning from the sensuous life to thought, and, through it, to God. But this return to God is possible in this earthly life only on rare occasions.

In order to reach the goal, the ordinary virtues of the philosophers will not suffice. Moderation of impulses is not enough, the soul must purge itself of all sensuality, free itself from the contamination of the body (κάθαρσις). There is, however, a still higher stage to be reached than purification: this is only a preparation for theoretical contemplation, or the immediate intuition of ideas; theory is superior to practice, because it brings us nearer to the vision of God. The highest stage, however, union with God, cannot be realized even by thought of this exalted kind; it is possible only in a state of ecstasy (ἔκστασις), in which the soul transcends its own thought, loses itself in the soul of God, becomes one with God. This is the mystical return to God. Mysticism

This system is a combination of Greek philosophy and Oriental religion. It is theistic in teaching a transcendent God, pantheistic in conceiving everything, down to the lowest matter, as an emanation of God. It is religious idealism: the final goal of the soul is to find rest in the mind of God, and though this is impossible of attainment in this life, man should prepare for it by keeping his mind on God, by freeing himself from the shackles of sense.

Plotinus does not reject polytheism; gods, too, are manifestations of the Divine. He also believed in the existence of good and evil demons in the sublunary regions, and in the possibility of psychic action in the distance: the entire universe being spiritual, it seemed natural that spirits should act upon one another sympathetically. Many of his successors exaggerated these superstitions, defended the popular polytheism, attacked the Christian religion, and reveled in magic and theurgy.

Porphyry of Tyre (232-304), the pupil of Plotinus, published the writings of his teacher with an account of his life. His object was to give an exposition of the philosophy of Plotinus rather than to develop it. He lays greater emphasis than the master on asceticism and the popular religion as means of purification, and accepts all kinds of Porphyry of Tyre

superstitious beliefs and practices (demonology, prophecy, idolatry, magic, and theurgy) for the same reason. He also wrote a biography of Pythagoras, commentaries on some of Plato's and Aristotle's works, an *Introduction to the Categories* (of Aristotle), an outline of the philosophy of Plotinus, a *Letter to Anebo on Demons,* and fifteen books *Against the Christians.* The *Introduction,* which played an important rôle in the philosophy of the Middle Ages, the *Outline* (in Latin translation), the biographies of Plotinus and Pythagoras, the *Letter,* the fragments of a small commentary, are still extant.

Jamblichus of Chalcis (+330), who is a follower of Neopythagoreanism as well as of Neoplatonism, makes use of philosophy largely as a defense and proof of his polytheistic religion. Superstition plays a still greater rôle in his doctrines than in those of Porphyry. Among his writings are: *On the Pythagorean Life, Exhortation to Philosophy,* and commentaries on Plato and Aristotle.

Jamblichus

Among the followers of Jamblichus were Julian the Apostate (Emperor from 361-363), who attempted to restore the old religion; Theodorus of Asine; Themistius, an excellent commentator of Plato and Aristotle; Macrobius; Olympiodorus; and Hypatia, who was put to death by Christians in Alexandria (415), an able expositor of the works of Plato and Aristotle. One of her pupils was Synesius, who later became a Christian bishop.

Neoplatonism was revived in the fifth century by Proclus (410-485), the head of the Academy at Athens. He was succeeded by Marius, Isidorus, and Damascius. In 529 the school at Athens was closed by an edict of the Emperor Justinian, and the history of Greek philosophy came to an official end. After this time, some good commentaries on the writings of Plato and Aristotle were published by Simplicius, the younger Olympiodorus, Boethius, the author of the well-known *Consolations,* and Philoponus. The works of Boethius as well as his translations of Aristotelian writings and of Porphyry's *Introduction* contributed largely to the knowledge of Greek philosophy in the early Middle Ages (see p. 163).

Close of School at Athens

But there was no more life in this philosophy, its efforts to resuscitate the old polytheism and to save the old civilization were vain; it had outlived its usefulness. The future belonged to the new religion against which it was so bitterly contending; and, by a strange irony of fate, this new religion, in its attempt to conquer the intellectual world, made an ally of the philosophy of the Greeks.

PHILOSOPHY OF THE MIDDLE AGES

RISE OF CHRISTIAN THEOLOGY

17. Beginnings of Christianity

We have traced the development of Greek philosophy from its mythological beginnings down to its decline into theosophical speculations and fantastic cultus. We found it turning, at the end, to ethical and theological discussions, to the problem of man's origin and destiny, his relation to God and the world, his fall and his deliverance from sin. The interest in such questions grew intense during the days of the Roman Empire, not only among philosophers, but among the educated classes in general, as the great popularity of the Oriental religions and of the systems of thought influenced by them plainly shows. But the Greek mind had lost its originality and vigor, and it was impossible "to revive the corpse of philosophy by breathing into it the spirit of Orientalism."

Revival of Religion

During the last period of Hellenic speculation, a new religion which possessed many elements to recommend it to the times, was making converts in the Roman world. This religion, which had sprung from the soil of Judaism, preached the gospel of a father-God who is merciful and just and loves all his children alike, and promised the redemption of mankind through Jesus Christ, his Son. It taught that no man was too lowly to be saved, that there was hope for all, that Christ would come again to establish his kingdom, first on earth and then in heaven, but, whether on earth or in heaven, it would be a kingdom of righteousness and love. It taught that, on the judgment day, the wicked, rich and powerful though they might be, would be confounded, and the pure in heart, however poor and lowly, would enter into glory. In offering deliverance from the sinful world and a future life of blessedness, Christianity

Christianity

struck a popular chord and satisfied a longing of the age. The conditions of deliverance were not made dependent on external and accidental goods, but on change of heart, repentance, and love of God and man. The Pharisaic conception of the righteousness of the letter is transformed by the founder of Christianity into the doctrine of the righteousness of the spirit. What is done should be done from love and worship of God and not from fear; purity of heart is of more avail, in his sight, than external observance of levitical rules and practices, the inner spirit of greater worth than outward forms. There is but one way of reaching salvation and that is to rid oneself of evil passions, of envy, anger, hatred, and revenge; to forgive even those that hate us, for it is better to suffer wrong than to do wrong. Love and forgiveness take the place of hate and revenge; man shall love his neighbor as himself, and every human being is his neighbor.

Christianity and Classical Culture

With its spiritual monotheism, its doctrine of a life to come, its gospel of love, and the example of the suffering Christ, the new religion appealed to the Roman world-kingdom. And as the number of its converts increased among the cultured classes, it could not ignore the philosophical conceptions rooted in the civilization in which it had to make its way. Indeed, Christianity, as it appeared in Palestine, owed its origin, in part at least, to this civilization; Judaism had not been able to resist the influences,—ethical, political, social, religious, and intellectual,—which pervaded the great Roman Empire; and the Christian revolt was one of the results. The new world-religion arrived when the times were fulfilled. Among the factors that made its appearance possible were the existence of a universal empire; the growing spirit of cosmopolitanism and brotherhood, which Stoicism had done so much to inculcate; the conception of a spiritual deity taught by the philosophers; the doctrines of immortality contained in the popular Greek mysteries and Oriental religions; and the Jewish ideal of a personal God, which succeeded in awakening the religious spirit where the abstract notions of the metaphysicians had failed. Christianity was, in a measure, a child of its age, a child of Judaism and Hellenic-Roman civilization. But the influence of the age did

not cease with its emergence into the world; in addressing itself to the Greeks and Romans of the times, it gradually assimilated the culture of the world to which it brought its tidings. Had the Jewish-Christian section of the new religion, which interpreted it as a phase of Judaism, triumphed, it is not unlikely that Christianity would have been buried beneath the walls of Jerusalem.

In order to deliver its message effectively, Christianity had to solve a number of important problems. It had to justify its faith to reason, to defend itself against the attacks of the publicists and philosophers who in time came to take notice of it, and to show the reasonableness of its teachings. It was necessary for its leaders to meet their opponents on their own ground, to make use of the philosophical conceptions familiar to their minds, to fight them with their own intellectual weapons,—their own philosophy. Such defenders of the faith, or *Apologists,* came when they were needed. But it also became necessary to define the creed, to formulate articles of faith, to establish a body of doctrine or dogmas. Here, again, minds trained in philosophy were of service in giving rational expression to the traditional beliefs of the Christian communities; and in this work, also, Greek thought exercised a significant influence on Christianity. The dogmas were officially defined by the great councils of the Church, but before agreement could be reached, much work had to be done: many solutions were offered and rejected, and many interpretations of the faith struggled for the victory. The victorious creed became the orthodox creed, and the thinkers who played important parts in defining it were called Fathers of the Church.

A. Harnack, *What is Christianity?* transl. by Saunders, and *Expansion of Christianity,* transl. by Moffatt; Pfleiderer, *Origin of Christianity; Development of Christianity;* and *Primitive Christianity;* McGiffert, *History of Christianity in Apostolic Age;* Gibbon's *Rome,* chap. xv; Mommsen, *History of Rome* (especially the volume on the provinces); Lecky, *op. cit.,* vol. I; Friedländer, *op. cit.;* Wendland, *Die hellenistisch-römische Kultur.* See also: Cheyne, *Encyclopædia Biblica;* Hastings, *Dictionary of the Bible,* and *Encyclopedia of Religion and Ethics.*

After the establishment of the fundamental doctrines and the triumph of Christianity as an organized State Church, came the

period of philosophical construction,—the elaboration of a philosophy the subject-matter and guiding principles of which were determined by the dogma. This philosophy, which constitutes the largest part of the philosophy of the Middle Ages, or Christian Philosophy, had for its aim the exposition, systematization, and demonstration of the Christian dogmas,—the construction of a theory of the world and of life on a Christian basis. The thinkers who performed this service were called Schoolmen and their systems Scholastic Philosophy.

Scholastic Philosophy

In all the cases we have mentioned, Greek philosophy was drawn upon for help in the solution of the problems. But the attitude of mind was not that of the ancient thinkers: their object had been, in the main, to give a rational explanation of the universe independently of the popular religion; they approached the task in a more or less scientific spirit, often even in a spirit antagonistic to the prevailing creed. The Schoolmen, on the other hand, accepted the truths of Christianity as beyond dispute; these formed the starting-point and regulative principles of their speculation; and these they sought to render intelligible and reasonable, or to prove. In order to succeed, they had recourse to such systems of Greek thought as best suited the end in view; with them, therefore, philosophy was placed in the service of religion; it became the handmaiden of theology (*ancilla theologiæ*).

Within the limits set by Christian dogma, the mind was left free to exercise its skill; so long as it did not conflict with established truths, human reason could interpret the world as it pleased. In the course of time, however, the intellect began to free itself from its theological tether and to seek satisfaction outside of the circumscribed territory; the scholastic attitude and method proved unsatisfactory, and attempts were made to construct systems on a more independent basis. From another side objections were also urged against the entire rationalistic movement: the dogmas and the whole ecclesiastical system were criticised and the effort made to transform the inner religious life of the people, with the Bible and the conscience as the guide and standard. These tendencies towards reforming the theoretical and practical phases of organized Christianity culmi-

nated in the two great preludes to the modern era: the Renaissance and the Reformation.

Consult, besides the general (especially the text-books of Stöckl and Turner) and special works mentioned on pp. 4, f.: Paulsen, *System of Ethics,* Book I, chaps. ii, iii, iv, vi; de Wulf, *History of Medieval Philosophy,* transl. by Coffey, and *Scholasticism Old and New;* A. Harnack, *History of the Dogmas,* transl. by Buchanan; Townsend, *The Great Schoolmen;* H. O. Taylor, *The Classical Heritage of the Middle Ages,* and *The Medieval Mind,* 2 vols.; Poole, *Illustrations of the History of Medieval Thought;* Lecky, *History of European Morals;* T. C. Hall, *History of Ethics Within Organized Christianity;* Brett, *History of Psychology;* Baeumker in *Allgemeine Geschichte der Philosophie,* mentioned p. 4 (excellent short account); Eicken, *Geschichte und System der mittelalterlichen Weltanschauung;* Picavet, *Esquisse d'une histoire des philosophies mediévales;* Prantl, *Geschichte der Logik im Abendlande,* 4 vols.; Stöckl, *Geschichte der Philosophie des Mittelalters,* 3 vols.; Hauréau, *De la philosophie scolastique;* Morin, *Dictionnaire de philosophie et théologie scolastiques;* Baeumker and others, *Beiträge;* Grabmann, *Geschichte der scholastischen Methode,* 2 vols.; Siebeck, *Geschichte der Psychologie von Aristoteles bis Thomas von Aquino;* histories of Christian ethics by Gass, Luthardt, Ziegler; A. D. White, *A History of the Warfare of Science with Theology;* Strunz, *Geschichte der Naturwissenschaften im Mittelalter;* Ebert, *Allgemeine Geschichte der Litteratur des Mittelaters.* Robinson, *Introduction to the History of Western Europe;* Emerton, *Medieval Europe;* Adams, *Civilization during the Middle Ages; Cambridge Medieval History.*

Paulsen, *German Universities,* transl. by Thilly and Elwang; Rashdall, *Universities of Europe in the Middle Ages;* Denifle, *Universitäten im Mittelalter;* books of Munroe and Graves mentioned p. 5.

18. Development of Christian Theology

As has been stated, the new religion was soon compelled to define its doctrines, to defend them, and to construct a Christian theology declaring its attitude toward the prevailing Jewish and Hellenistic modes of thought. The system best adapted to the immediate purpose at hand, in the beginning of the Christian era, was the Jewish-Greek philosophy which we have already outlined. "The allegorical explanation of the Old Testament became an indispensable means of combining the new faith with the old revelations," says Zeller, "and the logos-doctrine of Philo, which was fused with the Jewish-Christian Messianic belief, formed the center of the dogmatic movement in Christian theology for centuries to come."

Early Theology

We find the beginnings of Christian dogmatic theology in the writings of the Apostle Paul and his school. He was the first to offer a Christian theology or a philosophy of history on a Christian basis. The Epistles ascribed to him betray the influence of conceptions similar to those made use of in the so-called *Wisdom of Solomon* (doubtless known to him) and developed in the philosophy of Philo; Christ is identified with God's Power and Wisdom, the Logos; he preëxisted as the archetypal man, but was created by God. The same notion is brought out in Clement's *Epistle to the Corinthians* (93 to 95), the *Barnabas Epistle* (96 or 97), the *Shepherd of Hermas* (about 140), the *Fourth Gospel,* and in the writings of Ignatius (115).

In these ideas we have a fairly well-defined theology. The historical elements of Christianity are interpreted in the light of the Greek logos-doctrine; religious and philosophical elements are welded together in a way to emphasize the religious aspect: the Logos is a personality, the son of a living Father, not a cold philosophical abstraction. It was quite natural, however, that other thinkers, with a stronger bent for speculation, should have sought to interpret the new religion according to their philosophical preconceptions, to rationalize it, to transform faith into knowledge (γνῶσις, gnosis). This work was done in the second century by the Gnostics, as they have been called. Philo the Jew had interpreted Judaism in the light of Greek philosophy, and had tried to reconcile the thoughts of the Greek metaphysicians with those of the Jewish teachers. The Gnostics endeavor to do the same for Christianity; they speculate upon their faith, and offer a philosophy of Christianity and a Christian philosophy, a harmony of faith and knowledge, religion and science.

Gnostics

We have here an embryonic scholasticism, crude and fantastic though it may be. It was asserted by these Christian Philonists, as we might call them, that their doctrines had been transmitted by Jesus to such of his followers as were able to receive them, that is, as secret or esoteric teachings for the educated. They taught that Christianity was an entirely new and divine doctrine, Judaism a corrupt form of religion, the revelation of an inferior being, and heathenism the work of evil spirits. The Jewish God, or Demiurge, they regarded as a

false God, opposed to the kingdom of light, or the abode of the highest spirits, and to the true God. Christ, one of the highest spirits, entered a human body in order to free the spirits of light imprisoned in matter by the Demiurge. Those able to comprehend the genuine teachings of Christ become gnostics, or pneumatic beings, and are eventually delivered from their material bondage, asceticism being one of the means of escape. Such as fail to free themselves from sensuous matter perish with it, while the literalists (psychic beings) go to the heaven of the Demiurge. The world is the result of a fall; matter is the principle of evil; the exoteric doctrine is contained in the creed, the esoteric doctrine is a secret tradition.

Chief among the Gnostics are: Cerinthus (115 A.D.), Saturninus (125), and Valentine (+160). The system of Marcion, who formed a church at Rome, in 144, and accepted as canonical the Gospel of St. Luke and ten Pauline Epistles, contains teachings resembling Gnosticism, but emphasizes faith instead of knowledge and cannot, therefore, be assigned to this sect.

Special works on the Gnostics by H. L. Mansel, Neander, Baur, Matter. Cf. W. Schultz, *Dokumente der Gnosis,* which contains German translations of the sources, and the article in the *Britannica* by Bousset, where, also, bibliography is given.

It is evident, however, that the Gnostics were not equal to their task: instead of a philosophical system, they offered a "semi-Christian mythology." Besides, their doctrines were in conflict with the prevailing conceptions of the teaching of Jesus; their repudiation of the Old Testament, their distinction between an esoteric and exoteric Christianity, their conception of Jesus as a man whose body is used by a heavenly Christ, a creature far beneath God and even beneath the angels, their belief in specially endowed natures or pneumatic beings, and their allegorical interpretations, were all antagonized by the Apologists and other conservative leaders of Christianity and denounced as heresies. At the same time, the Gnostic movement exercised a great influence on the new religion and its theology. It gave an impetus to the philosophical study of the faith or theology. Some of its fundamental ideas, which came from Greek philosophy, found their way into the works of the early writers of the Church, and so became a factor in the evolution of the dogma.

Apologists

The Apologists did not differ from the Gnostics in their general aim to render the new religion intelligible; they, too, appealed to philosophy in their efforts to defend the faith against the heathen as well as against the fantastic interpretations of Gnosticism. Christianity was, for them, both philosophy and revelation; its truths were of supernatural origin and absolutely certain, but they were *rational* truths, even though they could be comprehended only by a divinely inspired mind. In the words of Harnack: "The conviction common to them all may be summed up as follows: Christianity is philosophy, because it has a rational content, because it gives a satisfactory and universally intelligible answer to the questions which all true philosophers have endeavored to answer; but it is not philosophy, indeed it is the direct opposite of philosophy . . . in so far as it is revealed truth and, hence, has a supernatural, divine origin, upon which alone the truth and certainty of its teaching ultimately rests."*

The Apologists were acquainted with the literature and philosophy of their times and addressed themselves to the educated classes. Indeed, nearly all the early leaders of the churches were men who, after their conversion, took up the cudgels for the new religion and sought to win favor for it among their own people. This is why the philosophical element generally predominates in their writings, and why the purely religious phase is so often placed in the background.

Among the leaders in this field are: Justin the Martyr (+166), Tatian (born about 130), Athenagoras (wrote about 170), Theophilus (Bishop in 180), Irenæus (born 120-130), Hippolytus (died after 235), Minucius Felix (second century), Tertullian (160-240), Cyprian (200-258), Clement of Alexandria (+216), and Origen (185-254). The movement culminated in the catechetical schools, perhaps the first of which was established in Alexandria by Pantænus, formerly a Stoic philosopher, in 180. The object of these schools was not only to defend the new religion and demonstrate its reasonableness, but to reduce the teaching to systematic form for the benefit of the clergy, whose duty it became to instruct the pagan and Jewish proselytes in the principles of the Christian religion. Origen, the greatest leader of the Alexandrian school, worked out a comprehensive Christian theology in which the influence of Neoplatonism, which had its home at Alexandria, is strongly marked.

* *Dogmengeschichte*, p. 89; *Outlines of History of Dogma*, transl. by Mitchell, p. 121.

Collections of the writings of the Fathers (Latin and Greek) edited by Migne, 1840, ff.; de Gerhardt and others, 1875, ff.; new edition, *Corpus Scriptorum Ecclesiasticorum Latinorum* by Vienna Academy (since 1866); Collection of Greek Fathers of first three centuries by Prussian Academy (since 1897); English transl. in The Ante-Nicene Christian Library, ed. by Roberts and Donaldson, and in Library of Nicene and Post-Nicene Fathers, ed. by Schaff and Wace.

Teachings of the Apologists

The fundamental thought in the writings of the Apologists is this: The world, though perishable, exhibits traces of reason and order, and points to one eternal, unchangeable, good and just First Cause, the source of all life and being. This principle transcends all life and being: the sublimity, power, wisdom, goodness, and grace of God are beyond all human notions, beyond all description. Yet the First Cause of all creation must be rational; reason must always have been potential in him as a part of his inner nature; and to the presence of Reason, or the Logos, in God, are due the order and purpose in the universe. In other words, reason and goodness lie at the root of the world, and God is the eternal and abiding principle in all change.

By an act of free will God emits the Logos: the Logos proceeds from him as the light proceeds from the sun. And as the light emitted from the sun does not separate from the sun, so the divine Reason does not separate from God in the procession; by giving birth to the reason in him, God does not lose his reason; the Logos remains with the Creator, subsists with the source whence it sprang. At the same time, the Logos is conceived as an independent personality,—identical with God in essence, but not numerically,—a second God who has been eternally with God. The Logos became man in Jesus Christ, Christ being the incarnate Logos, "the word made flesh." The Holy Ghost is another emanation from God; *i.e.*, the prophetic spirit, which springs from God, is conceived as an entity.

We have in these conceptions the personification of divine reason with which we have become familiar in the Greek philosophy of religion: reason is the organ by which the world is fashioned and through which God indirectly acts on the world. The transcendency of God is emphasized, and the attempt is also made to save the independence of the Logos: the Logos is conceived as eternally with God, as co-eternal with him, as the phrase

goes, as potential in him, as identical with him in his very nature; and yet the Father is said to be the source of his being and activity (Irenæus), hence he would seem to be subordinated to the Father,—a creature. Moreover, he becomes a person by God's will, which would imply that there was a time when he was not, which, again, would make him a creature. Origen undertakes to solve this difficulty by combining both ideas and teaching that the Logos is eternally created. The act of creation is not an act in time, but an eternally present one, *semel et simul:* the Son is eternally and continuously created.

The creation of the world is explained after the Greek models. God is the ground and purpose of all things: from him they come and to him they return. The Logos, however, is the pattern, or archetype, or prototype, of all created beings; which means, everything is created in the image of reason and by the power of reason or divine intelligence. We may put it this way: the Creator fashioned the world from formless matter, —which he created out of nothing,—after a pattern or rational plan which he carried in his mind. This system of thoughts is conceived by the Apologists as a personal entity, which, as an active cause, forms, preserves, and controls everything.

Creation is the result of God's love and goodness and for the benefit of man. According to the majority of the Apologists, creation is an act in time; according to Origen, God creates eternally, and creatures have always existed. The universe is for him, as it was for Aristotle, eternal, but the world now existing has had a beginning and will pass away, to be replaced by other and different worlds.

The world was made for the sake of man. The goal of man, however, is not this world, but the hereafter. Other-worldliness, world-flight, the withdrawal of the soul from the world of sense to God, is the highest good. The resurrection of the body and soul (or spirit) in some form or other, is taught by all the Apologists; sometimes soul and body are both regarded as mortal, immortality being bestowed on them as an act of divine grace, according to the works of the soul (Justin); sometimes man is held to possess, in addition to body and soul, a higher spirit which is immortal and through which body and soul share in immortality (Tatian); sometimes this spirit is said to be

conferred from above upon those who control their passions.

Another teaching common to the Apologists is that of free will and the fall of man. God created spirits with the capacity to distinguish between good and evil and the power of freedom to choose between them. Some chose to disobey God, to turn flesh-ward and away from God, for which sin they fell to a lower level of life in carnal bodies. Man may regain his lost estate by leading a Christian life and through divine grace, through the revealed truth of the Logos. On the day of judgment, after a sojourn in Hades or Purgatory, the just will enter eternal life, and the unjust be forever rejected. Origen, however, believed in the final redemption of all. The thought running through this teaching is that, in sinning, the first man or a heavenly spirit, as the case may be, brought sin into the world, for which mankind is suffering, but that there is hope for our ultimate redemption if we will only turn away from the things of sense and seek to be reunited with God.

The fundamental article of faith declares that the human race is redeemed by Jesus Christ, the Son of God, that the Son of God came to deliver man from sin. This simple proposition gave rise to a number of problems over which the Christian theologians debated for centuries to come, and which received official settlement only after long and bitter controversies. The proposition contained three important notions: God, Jesus Christ, and man. How shall we conceive God the Father, the Son of God, and human nature in the scheme of salvation? How are these beings related to one another: the Father and the Son, or Logos; the Son and the man Jesus; and God and man?

Logos-Doctrine

The logos-doctrine, which appears so prominently in early Christian theology, did not penetrate into the rank and file of the early Church. The simple-minded Christian of the first centuries, living in a polytheistic community, believed in the Father, Son, and Holy Ghost without interpreting his faith metaphysically; for him Jesus the man was somehow the Son of God, and the Holy Ghost another supernatural being: the metaphysical nature and relation of these beings to one another and to God, he did not

attempt to fathom. The intellectual leaders of the Church, in their endeavors to defend the faith against Gnostics and pagan philosophers, were carried farther and farther into the speculations of the Greek schools, until they finally hellenized the Gospel. It was quite natural that the logos-doctrine should have met with serious opposition in many quarters and that efforts should have been made to reach a less metaphysical interpretation of the fundamentals of the faith. Many sects arose which sought to express the teachings of Christianity in a form intelligible to those not familiar with theological speculations. The doctrine which had the largest following among Christian bodies from 130 to 300 was Modalism, which was called Patripassianism in the Western Roman world and Sabellianism in the East. According to the former, God assumed flesh, became man and suffered in the flesh; according to the latter, God manifests himself in three successive ways or powers, as Father, Son, and Holy Ghost. In either case, the three persons are one and the same God in different forms or modes.

But these views did not prevail against the logos-theology; by the end of the third century the philosophical theology had triumphed; Harnack says, "it even read its articles into the creed." The thinkers all succumbed to the influence of Origen. His successors made the faith so philosophical that it became unintelligible to laymen; the purely cosmological and philosophical elements were emphasized at the expense of the idea of salvation,—formulæ were established in which the name of Christ was not even mentioned. The Neoplatonism of Origen's system threatened to swamp Christianity.*

The question of the relation of the Logos to God, or of the Son to the Father, formed the subject of a great controversy at the Council of Nicæa, in 325, between the Arians, the followers of Arius, and the Anti-Arians, of whom Athanasius afterward became the leader. According to Arius, Christ is a creature of God, endowed with free will, which God foresaw he would use for good, and, therefore, conferred on him the dignity of a God at his creation. According to Athanasius, the Son, as the principle of salvation, is begotten, not made, by the Father; co-eternal with the Father, of one substance with the

* Harnack, *Outlines of History of the Dogma*, pp. 193, ff.

Father (*homoousios*); sharing fully in the nature of the Father, without loss to the Father and without ceasing to be another person. In the historical Jesus, the Logos-God, or the Son, was united, in essence, with a human body; the incarnation was a complete incarnation. The Holy Ghost is a third being; the one Godhead is a trinity of the same substance, consisting of three persons identical in nature.

The Anti-Arians won the victory at the Council; the Arian doctrines were condemned and Arius and his followers excommunicated. The words " begotten, not made, being of one substance with the Father " were inserted in the creed which has come to be called the Nicene creed. An unsuccessful attempt was later made to effect a compromise between Arianism and Athanasianism by declaring God and Christ to be, not of the same substance (*homoousios*), but of like nature (*homoiousios*), and failure to agree on this point led to a division between the Roman and Greek Churches.

Both parties to the controversy had sought support for their views in the Neoplatonic philosophy of Origen; and the orthodox interpretation, no less than the defeated theory, is based on the logos-doctrine.

Another question to stir up controversy was the problem of the relation of the man Jesus to the Logos-God, the Christological problem. Many answers were offered and many factions formed in support of the different theories. The interpretation that Christ had two natures, " each perfect in itself and each distinct from the other, yet perfectly united in one person, who was at once both God and man," was accepted by the Synod of Chalcedon, in 451, and became the orthodox dogma.

After the establishment of the dogma at Nicæa, Christian philosophy was studied chiefly in the school of Origen, at Alexandria. The orthodox doctrines were adopted, in the main, and such teachings in Origen's system as conflicted with them rejected. Among the representatives of the school who assisted in the work of reconstruction, were Gregory of Nyssa (+394), Basil the Great (+379), and Gregory of Nazianzen (+390). Neoplatonism, as taught by Plotinus, also had a large following, among the leaders being: Bishop Synesius (+430), Bishop Nemesius (*c.* 450), Æneas of Gaza (*c.* 530), Zacharias Scholasticus, Johannes Grammaticus, and Johannes Philoponus, all of the sixth century. The Neoplatonic work, falsely attributed to Dionysius the Areopagite, appeared at the end of the fifth century.

A third question demanded an official answer: What is the place of man in the scheme of salvation? According to one view, which was widespread, the whole human race had been corrupted by the sin of the first man or a fallen angel; and divine help, in some form or other, was needed to redeem mankind. The fundamental article of faith that Christ had come down from heaven for our salvation seemed to favor such an interpretation: if it was necessary to deliver man from sin, then evidently he could not save himself, he was a slave to sin and by nature a sinner (original sin) or had become a sinner in some way; at any rate he was not free. This conception received support from the Manichæans, a numerous sect accepting the teachings of the Persian Mani (+277), who read Persian dualism and Gnosticism into the Scriptures and combined Christianity with the doctrines of Zoroaster. They taught that the principle of light in man was under bondage to matter, the principle of darkness, and that the soul could be purified and enabled to return to the kingdom of light whence it came, only by asceticism, by abstention from meat, wine, marriage, property, and labor. But it was possible to read a different view into the article of faith: Christ came to save man from sin. Sin implies guilt, guilt implies responsibility on the part of the guilty person; only a being who is free to choose between right and wrong can be a sinner. Hence, if man sinned, he must have been free. The same conclusions were reached in another way. God is all-powerful and man, therefore, weak and unfree, incapable of saving himself from sin; only a miracle can deliver him. Or: God is absolutely good and just, and cannot, therefore, be responsible for sin; hence, man himself must be the author of sin, that is, free.

Free Will and Original Sin

Pelagius, a monk, came to Rome, in the year 400, with a doctrine opposed to the notion of original sin: God is a good and just God, and everything created by him good; hence, human nature cannot be radically evil. Adam was free to sin or not to sin; his sensuous nature, which is evil, determined him, and he chose sin. Sin, however, cannot be transmitted from generation to generation, because every man has free will: sin implies freedom. Freedom is the original act of grace, the first gift

bestowed by a good God; hence, man needs no help, he can resist sin and will the good. And yet, the example of Adam's sin was baneful; the imitation of his bad example has led to a habit, which it is difficult to overcome, and which is responsible for man's fall. But, the churchman asked: If man is not enslaved by sin, if his freedom of choice has not been destroyed, what part can divine grace and the Christian religion play in his redemption? The Pelagians answer: It is by an act of divine grace that knowledge is revealed (in Scripture, in the teachings and example of Jesus, and in the doctrines of the Church) which will lend support to the human will in choosing the good. Baptism and faith in Jesus Christ are necessary to admission into the kingdom of heaven. God, being omniscient, knows exactly what choices men are going to make in their lives, —how they will use their power of freedom,—and determines beforehand the rewards and punishments to be meted out (predestination).

19. World-view of Augustine

The Pelagian teaching is opposed by Augustine, the greatest constructive thinker and the most influential teacher of the early Christian Church. In his system the most important theological and philosophical problems of his age are discussed, and a Christian world-view developed which represents the culmination of Patristic thought and becomes the guide of Christian philosophy for centuries to come. It is owing to the significance of Augustine's views for medieval philosophy, as well as for the Christian theology of the Reformation and the modern period, that we shall consider his system in its different phases.

Augustine

Aurelius Augustinus was born in Tagaste, Northern Africa, in 353, of a pagan father and a Christian mother, Monica, who exercised a profound influence on her son. He became a teacher of rhetoric, first in his native city, later at Milan (384-386), and devoted himself to the study of theological and philosophical questions, which carried him from Manichæism to skepticism, and left him unsatisfied. In 386 he began to read some of the writings of Plato and the Neoplatonists, which gave stability to his thought, and came under the influence of the eloquent Bishop Ambrose of Milan, whose sermons touched his heart. After his conversion in 387 he returned to Tagaste, where he

lived for three years (388-391) according to monastic rules, and was ordained to the priesthood. In 396 he was raised to the bishopric of Hippo, in Africa, which he held until his death in 430, devoting his great gifts to the development and propagation of Catholic doctrine.

Among the works of Augustine are: *De libero arbitrio; De vera religione; De prædestinatione et gratia; De trinitate; De civitate Dei; Confessiones; Retractiones;* and *Letters.*

Works in Migne's collection, vols. XXXII-XLVII; transl. ed. by Dods, 15 vols.; also in Schaff's Library, vols. I-VIII. McCabe, *St. Augustine and his Age;* Boissier, *La fin du paganisme;* writings by Bindemann, A. Dorner, Reuter, Böhringer in his *Church History,* vol. XI, Martin.

Characteristic of the spirit of the entire Christian age is the Augustinian view that the only knowledge worth having is the knowledge of God and self. All the other sciences, logic, metaphysics, and ethics, have value only in so far as they tell us of God. It is our duty to understand what we firmly believe, to see the rationality of our faith. "Understand in order that you may believe, believe in order that you may understand. Some things we do not believe unless we understand them; others we do not understand unless we believe." Besides natural knowledge, faith in divine revelation is a source of knowledge of God. Intelligence is needed for understanding what it believes; faith for believing what it understands. Reason, to be sure, must first decide whether a revelation has actually taken place. When faith has comprehended the revelation, reason seeks to understand and explain it. We cannot, however, understand everything we believe, but must accept the truths of faith on the authority of the Church, which is the representative of God on earth.

Theory of Knowledge

We know that we exist; our thinking and existence are indubitable certainties. And we know that there is eternal and immutable truth: our very doubts prove that we are conscious of truth, and the fact that we call a judgment true or false points to the existence of a world of truth. Augustine here conceives truth, after the Platonic fashion, as having real existence, and the human mind as possessing instinctive knowledge of it. Sometimes he speaks as if we envisaged the divine ideas, at other times he says that God creates them in us. In either case, truth is objective, not a mere subjective product of the human mind; there is something independent and compelling

about it; whether you or I have it or not, it is and always will be. The source of this eternal and changeless world of truth is God; indeed, the divine mind is the abode of the Platonic world of ideas, forms, archetypes, or essences, even of the ideas of particular things.

Theology

The impelling motive in Augustine's theology is the Neoplatonic conception of the absoluteness and majesty of God and the insignificance of his creatures, considered apart from him. God is an eternal, transcendent being, all-powerful, all-good, all-wise; absolute unity, absolute intelligence, and absolute will; that is, absolute spirit. He is absolutely free, but his decisions are as unchangeable as his nature; he is absolutely holy and cannot will evil. In him willing and doing are one: what he wills is done without the help of any intermediate being or Logos. In him are all ideas or forms of things; which means that he proceeded rationally in creating the world and that everything owes its form to him. Augustine accepts the Athanasian doctrine of the Trinity, although the illustrations which he uses to make it clear are tainted with Sabellianism.

God created the world out of nothing; it is not a necessary evolution of his own being, as the pantheistic Neoplatonists hold, for this transcends the nature of his creatures. His creation is a continuous creation (*creatio continua*), for otherwise the world would go to pieces: it is absolutely dependent on him. We cannot say that the world was created in time or in space, for before God created the world there was neither time nor space; in creating, he created time and space; he himself is timeless and without space. Yet, God's creation is not an eternal creation; the world has a beginning; creatures are finite, changeable and perishable. God also created matter; it is not earlier than the form, though prior to it in nature, that is, we have to presuppose matter logically as the basis of the form. Since God is omnipotent, every conceivable thing, even the most insignificant, must be present in the universe.

In order to prove divine omnipotence, Augustine is driven to the position that God is the cause of everything. In order to prove his goodness, it is necessary to exclude evil from the world or explain it away. Creation is a revelation of God's goodness;

he created the universe on account of his infinite love. (But,—Augustine hastens to add, for fear of depriving the Deity of absolute power,—he was not bound to create, his love did not compel him; it was an act of his free will.) Every kind of existence is, therefore, in a sense, good; only we should not judge its value from the standpoint of human utility. If God has created and predetermined everything and is at the same time an absolutely good being, he has willed everything for the best of his creatures, and even evil must be good in its way. Like the shadows in a picture, it belongs to the beauty of the whole; evil is not good, black is not white, but it is good that evil is. Or, it is conceived as a defect, as privation of essence (*privatio substantiæ*), as an omission of the good; in this sense, if there were no good, there could be no evil. Good is possible without evil, but evil is not possible without the good; for everything is good, at least so far as it has any being at all. Privation of good is evil because it means an absence of something nature ought to have. Nor can moral evil mar the beauty of universal creation. Moral evil springs from the will of man or fallen angels; it is the result of an evil will, which, however, is nothing positive; hence, it merely represents a defective will; it, too, is privation of good (*privatio boni*). The worst evil is *privatio Dei,* the turning away from God, or the highest good, to the perishable world. God could have omitted evil from the scheme of things, but he preferred to use it as a means of serving the good; the glory of the universe is enhanced by its presence (optimism). He foresaw, for example, that man would turn from the good to sin; he permitted it and predetermined his punishment. That is, in order to save God's goodness along with his omnipotence, Augustine (1) denies the existence of real evil or makes it relative; (2) defines it as a privation of the good; (3) shifts the responsibility for it to man.

Psychology

Man, the highest creature in the visible world, is a union of soul and body. This union is not the result of sin; the body is not the prison-house of the soul, and evil. The soul is a simple immaterial or spiritual substance, entirely distinct in essence from the body; it is the directing and forming principle, the life of the body; but how it acts on the body is a mystery. Sensation is a mental, not a physical

process. Sense-perception, imagination, and sensuous desire are functions of the sensitive or inferior soul; memory, intellect, and will, of the intellectual or superior soul or spirit, which is in no wise dependent on the body. All these functions, however, are functions of one soul: the soul is a unity, three in one, the image of the triune God. Since the will is present in all modifications of the soul, we may say that these are nothing but wills.

The soul is not an emanation from God; each man has his own individual soul. Nor did souls exist before their union with bodies (preëxistence). How they arose, Augustine leaves unsettled; it is a problem he is unable to solve. He finds it hard to decide in favor of any of the views common in his day: that God creates a new soul for every child that is born (*creationism*) or that souls are generated from the souls of parents in the same way, and at the same time, as bodies from bodies (*traducianism*).

Although the soul has a beginning in time, it does not die. Augustine proves its immortality by the usual arguments of his age, which go back to Plato. Still, although the soul is immortal in the sense of continuing to exist, it is not necessarily immortal in the sense of realizing eternal blessedness. The eternal blessedness of the soul in God cannot be demonstrated: our hope in it is an act of faith.

Ethics

The supreme human goal is union with God, that is, a religious, mystical ideal: the vision of God. Such a union cannot take place in an imperfect world, but only in a future life, which is the true life. Our earthly life is but a pilgrimage to God; in comparison with eternal blessedness, it is not life, but death. We have here the characteristic pessimism of early Christianity with respect to the visible universe, and buoyant optimism so far as the hereafter is concerned: *contemptus mundi* on the one hand, and *amor Dei* on the other. The dualism between the good God and the evil world, however, Augustine seeks to reconcile by his theory of evil, which we have already considered and according to which there is no absolute evil. The way is also shown by which the ethical dualism between the highest good and our workaday morality may be bridged.

By love we are united with God, the highest good; hence love is the supreme virtue, the source of all the other virtues: of temperance or self-control, which is love of God as opposed to love of the world; of fortitude, which overcomes pain and suffering by love; of justice, which is the service of God; and of wisdom, which is the power of right choice. Love of God is the basis of true love of self and of others. It is the love of God alone that makes the so-called pagan virtues genuine virtues; unless inspired and prompted by this love, they are nothing but "splendid vices."

The love of God is the work of divine grace acting within: a mystical process taking place in the sacraments of the Church under the influence of God's power. Faith, hope, and charity are the three stages in moral conversion, love being the highest. "Whoever loves right, doubtless also believes and hopes right." "Without love faith can do nothing; nor is love without hope, nor hope without love, nor either without faith."

In this teaching lies the possibility of a more positive attitude toward earthly life and human institutions than seemed possible under the ideals of primitive Christianity. The early Christians had assumed a negative attitude toward human institutions: marriage, the affairs of State, war, the administration of justice, commercial pursuits, and so on. But with the development of an organized Church and the Christianization of the Roman Empire, a change became necessary: the immediate result of this change was a kind of oscillation between world-denial and world-affirmation. We find it in Augustine: he wavers between the ascetic ideal and the worldly ideal. His attitude is the characteristic attitude of medieval moralists. Thus, he recognizes the right of property; he does not agree with the old Fathers that property is based on injustice, that all have an equal right to property, that wealth is a "damnable usurpation" (Ambrose). He also regards rich and poor alike as capable of salvation. Nevertheless, he looks upon the possession of private property as a hindrance to the soul, and places a higher value upon poverty. Let us, therefore, abstain from the possession of private property, he says, or if we cannot do that, let us abstain from the love of possession. The same dualism confronts us in the estimate of marriage and virginity: mar-

riage is conceived as a sacrament, and yet the unmarried state is the highest.

His conception of the State reveals the same thing. The earthly State is based on self-love and even contempt of God (*contemptus Dei*); the City of God, on love of God and contempt of self. Nevertheless, the temporal State is an ethical community with the mission to promote earthly happiness, and justice reigns in it. But its goal is relative, while that of the Church is absolute; hence, the State is subordinate to the Church; the authority of the Church is infallible, it is the visible appearance of the kingdom of God.

In short, we find in Augustine a twofold ideal. The highest good or perfection is a transcendent good, which even the Christian is unable to realize in the flesh, being still under the sway of carnal concupiscence: consequently, his perfection consists in love of God, in the good will. A certain degree of perfection, however, a kind of holiness, may be reached by the performance of certain external works: venial sins may be wiped out by prayer, fasting, alms. Yet the supreme and true goal is, after all, renunciation of the world, withdrawal from social life, asceticism, imitation of Christ. The monastic life remains, for Augustine, the Christian ideal.

The leading trait of this ethical teaching is its idealism. The greatest thing in the universe is not the material aspect of existence, but spirit; the greatest thing in man is not body, not his sensuous-impulsive nature, not the satisfaction of appetite, but spirit.

Augustine opposes the Pelagian theory of the will. Man was, indeed, free to sin or not to sin in Adam; God not only created him free, but also endowed him with supernatural gifts of grace: immortality, holiness, justice, freedom from rebellious desire. But Adam chose to disobey God and thereby not only lost the divine gifts, but corrupted the entire human race, so that it has become a "mass of perdition." The first man transmitted his sinful nature, and the punishment necessarily connected with it, to his offspring, for he represented the whole human race. And now it is impossible for man not to sin (*non posse non peccare*): he went into sin free and came out of it unfree. Adam's sin is

Freedom of the Will

not merely the beginning and example of sin, it is original, hereditary sin. The result of it all is that the entire human race stands condemned, and no one will be saved from merited punishment except by the mercy and unmerited grace of God. God alone can reform corrupted man. He does not select the recipients of his grace according to their good works,—indeed, the works of sinful man cannot be good in the true sense of the term,—only those whom God has elected as marks of his grace can perform good works: "the human will does not achieve grace by an act of freedom, but rather achieves freedom by grace." That is, God can bring about such a change in the human soul as will give it the love of the good which it possessed before Adam fell. The knowledge and love of the highest good, or God, restores to man the power to do good works, the power to turn away from the life of sense to God: in other words, the power of freedom, the will to emancipate himself from the flesh. Freedom means love of the good; that is, only the *good* will is free.

The thought underlying this teaching is that unless a man has a notion of the good, unless he knows what is truly good and loves it, he is lost. Some men have the good will, others are without it. Augustine's problem is to account for its appearance in some persons and not in others, and he explains it as a free gift of God.

Why God should have chosen some for eternal happiness and others for eternal punishment is a mystery; but there is no injustice in his choice, since man has forfeited any claim he may have had to salvation. Yet, is not predestination identical with fatalism; does it not mean that God has determined beforehand who shall be saved and who destroyed, and that his choice is purely arbitrary? Predestination is the eternal resolve of God to lead this or that man to eternal life by the infallible means of grace. Predestination implies foreknowledge of his choice. But that has nothing to do with the man's freedom, Augustine thinks: he was free to choose eternal life, he did not choose it; God knew that he would not, and has decided beforehand whom to save. Here, again, we have an example of Augustine's conception of the absolute power of God; he is unwilling to limit divine freedom in the slightest degree: God can do as he pleases

with man, and he has settled from all eternity what is going to happen to every individual. Man has had his chance in Adam; he abused the privilege, and God knew he would abuse it; but he was under no compulsion to go wrong and he has no right to complain if he is not among the elect. Nevertheless, if he truly loves God, if he has the holy will, he is redeemed.

Those whom God has chosen for redemption constitute the City of God, and those who are chosen for destruction form the city of this world, the kingdom of evil. Human history represents a struggle between the two kingdoms, the last stage of which is the period inaugurated by Christ, through whom divine grace is bestowed. The kingdom of God reaches its perfection in the Christian Church: it is the kingdom of God on earth. No one can be saved outside of the Church, although not every one in it will be saved. Who is to be saved, no one knows. The battle between the forces of good and evil will end in the victory of the righteous; then will follow the great Sabbath, in which the members of the City of God will enjoy eternal blessedness, while the children of evil will suffer eternal punishment in the eternal fire together with the devil.

BEGINNINGS OF SCHOLASTICISM

20. Dark Ages

Patristic philosophy reached its climax in the system of Augustine, which was the last great product of classical-Christian civilization and a heritage bequeathed by dying antiquity to its barbarian successors. The century that had given birth to this work also witnessed the downfall of the Western Roman Empire and the rise to political power of the young and vigorous peoples of the North. The Visigoths took possession of Gaul and Spain, the Vandals overran Africa, and the Ostrogoths placed themselves on the throne of the Cæsars (476). The problem now became to amalgamate Roman-Christian culture with the notions and institutions of the Germanic peoples, a task which required a thousand years to complete. During this period, called the Middle Ages, a new

New Peoples

civilization is slowly developed from the mixture of materials contributed by the different human factors involved, and a new political, social, intellectual, and religious order arises. How thoroughgoing was the process of transformation going on, may be seen from the evolution of new languages, new states, new customs and laws, new religions, new forms of life of every kind; the old civilization disappeared in the great melting-pot of European races. The completion of the process marks the beginning of the modern era.

That this work did not proceed very rapidly is not surprising; the traditions and institutions of the past could not be assimilated except by slow degrees. No people changes its life all at once, and no people is ever completely transformed. Before becoming the bearers of the civilization offered by Roman Christianity, the barbarous tribes had many lessons to learn; they were obliged to assimilate the new culture with their own organs; it had to pass into a barbarian soul with a long history of its own. Nor is it surprising that the higher culture of the old world should have fallen into neglect and that the field of philosophy, which the Christians had in part appropriated and cultivated, should have lain fallow for many centuries. It was no time for the construction of metaphysical and theological systems; the age was confronted with serious practical problems in every department of human activity. Besides, philosophy is a man's business, and the new peoples were still in their school-days. The very elements and instruments of knowledge had first to be acquired before they could appreciate the highest achievements of a cultivated race. The immediate problems were pedagogical, and the learned literature of the period, from Augustine down to the ninth century, was largely limited to text-books on the seven liberal arts and compendia of Christian dogmatics.

Philosophy, tethered as it was to Christian theology, was merely preserving the traditions of the past. In the more cultivated Eastern Empire interest in theological questions was well-nigh universal, but it expressed itself in fruitless dogmatic controversies and in the production of encyclopedic manuals or systematized collections of the dogmas, like that of John of Damascus (around 700). In the West, scientific, logical, and

philosophical text-books and commentaries were written by Martianus Capella (around 430), Boethius (480-525), and Cassiodorus (477-570), while Isidore of Seville (+ 636) and the Venerable Bede (674-735) achieved an easy fame for learning by compiling compendia remarkable only for their meagerness of original thought. For several centuries there were practically two distinct literatures running along side by side, the classical and the Christian; for the hybrid Christian works many educated Greeks and Romans had nothing but contempt. Of the classical philosophy, which continued along the lines of Stoicism, Neopythagoreanism, and Neoplatonism we have already spoken in our account of Greek thought.

Beginnings of Learning

With the conversion of the educated classes in the Roman Empire, and the development of the ecclesiastical organization, the Christian clergy had gradually assumed the intellectual leadership which formerly rested in the philosophers' schools, and had become the custodians of learning; nearly all the great writers in the East and West belonged to the clergy. At the beginning of the Middle Ages, however, with the ascendency of the Germanic races, the torch of knowledge flickered dimly, and the secular Christian clergy, recruited now, for the most part, from the sons of barbarians, found neither pleasure nor honor in the cultivation of Greek philosophy, literature, and art. The seventh and eighth centuries constitute perhaps the darkest period of our Western European civilization, a period of boundless ignorance and brutality, in which the literary and artistic achievements of the classical past seemed destined to be lost in the general ruin. It was during this bleak age that the monasteries became the refuge, not only of the persecuted and oppressed, but of the despised and neglected liberal arts. In them, what had survived of literature, science, and art was being preserved and cultivated; manuscripts were copied and the love of higher spiritual ideals kept alive. The monasteries also established schools, and gave instruction, meager and barren though it was. A more hopeful epoch began when Charlemagne, in order to encourage education, called scholars to his realm and founded schools in which the seven liberal arts (grammar, rhetoric, logic, arithmetic, geometry, astronomy, and music) were taught: Paul the Deacon (the

historian of the Lombards), Einhard, Angilbert, and, greatest of all, the Anglo-Saxon Alcuin (735-804), a pupil of the monastic school at York, who became the Emperor's chief adviser in matters of education, and who seems to have succeeded in arousing a lively interest in philosophical questions at his monastic school at Tours. Alcuin himself wrote text-books on grammar, rhetoric, and dialectics,—the *trivium*,—and a work on psychology that shows the influence of the Platonic-Augustinian conceptions. Among his pupils were Fredegisus (author of *De nihilo et tenebris*) and Rabanus Maurus (776-856), compilator and text-book writer, who has been called the creator of the German schools.

No work of any importance to the history of thought appeared, however, until the middle of the ninth century, when John Scotus Erigena (or Eriugena) published a book which may be regarded as the continuation of Patristic philosophy and the forerunner of a new era in the history of Christian thinking. To this period, which has received the name of Scholasticism, we shall now turn, outlining first the general characteristics of the Middle Ages.

Church, *Beginning of the Middle Ages;* P. Munroe, *History of Education;* Graves, *History of Medieval Education,* chaps. i-iv; Mullinger, *The Schools of Charles the Great;* Lecky, *op. cit.,* chap. iv; Gaskoin, *Alcuin;* West, *Alcuin and the Rise of Christian Schools;* Werner, *Alcuin und sein Jahrhundert.* Feasy, *Monasticism;* Wishart, *Short History of Monks and Monasteries;* Gasquet, *English Monastic Life;* Zöckler, *Askese und Mönchtum;* Heimbucher, *Orden und Kongregationen,* 3 vols.; A. Harnack, *Monasticism,* transl. by Kellett and Marseille.

21. Spirit of the Middle Ages and Christian Philosophy

During the Middle Ages, the words authority, obedience, subordination, form important terms in the vocabulary of life. In politics, religion, morals, education, philosophy, science, literature, art,—in every sphere of human activity,—the influence of organized Christianity is supreme. As the vice-gerent of God on earth and the source of revealed truth, the Church becomes the guardian of education, the censor of morals, the court of last resort in intellectual and

Principle of Authority

spiritual affairs, indeed the organ of civilization and the bearer of the keys of heaven. Since she receives the truth from God direct, what need is there of searching for it: what need of philosophy except as the handmaiden of theology? Human reason is limited to systematizing and rendering intelligible the revealed truths or dogmas of the Christian religion. The individual is subordinate to the Church in his religious beliefs and practices, the Church stands between him and his God; in all the important matters of life and death, the shadow of the cross appears. There is no salvation for the individual outside the great City of God, which watches him from the cradle to the grave and even gives him his passports to heaven. Education, too, is a function of the ecclesiastic hierarchy: to be sure, who should teach God's truth but the mediator through whom it is revealed; and who, besides, exercise the censorship over human conduct but the supreme earthly authority of right and justice? The Church likewise holds herself superior to the State and seeks to apply her theory in practice, as witness her conflicts with the German Emperors; as the sun is to the moon, so is the Church to the State. The ambition of Pope Innocent III (1198-1216), under whom ecclesiastical power reached its climax, was to be the master of the world. The State itself in time comes to assume the same attitude of authority toward the people: kings rule by divine right and subjects are divinely ordained to obey. Within the body politic the individual finds himself under restraint and discipline, socially, politically, economically: for the great mass obedience is the law of life, subjection of self to the authority of some group: obedience to the ruler, obedience to the lord, obedience to the guild, obedience to the master, obedience to the head of the family. Authority and tradition are superior to public opinion and the individual conscience; faith, superior to reason; the corporation, superior to the person; and the caste, superior to the man.

Problem of Scholasticism

The philosophical thought of this period mirrors the spirit of the times. Tradition and authority play a leading rôle in it; scholars swear by the Church, by Augustine, Plato or Aristotle, by their monastic orders or by their schools. Assuming the truth of the church doctrines and yet feeling a strong desire for speculation, they

endeavor to harmonize, wherever they can, by reading the Christian faith into their philosophies or their philosophies into the Christian faith. But the faith is the beginning and the end of their labors, theology the crown of all knowledge, the royal science. And even where knowledge is dumb, where reason stumbles, the truths of religion are still believed, all the more firmly believed by some because of their mystery; and speculative theology is either cast aside as futile or consolation sought in the principle of a twofold truth,—truth of reason and truth of faith.

Patristic philosophy had been occupied in developing and formulating the articles of faith and organizing them into a rational system. Scholasticism is confronted with a fixed body of established doctrine when it enters upon the scene; the process of fermentation had practically come to an end. It is confronted, likewise, with an organized hierarchy, ready and able to defend its truths against all dissenters with the weapons of Church and State. The problem now is to work out a system of thought that will square with the dogmas, that is, harmonize Science and Faith. The schoolmen, like the Greek philosophers before them, aim at a rational explanation of things; only they approach the task with a definite preconception of the goal. Certain fundamental truths are already known; the scheme of salvation is itself a universal fact; the business of the philosopher is to interpret it, to connect it with the rest of our knowledge or to render it intelligible. The assumption of the medieval thinker is either that the truths of religion are rational, that reason and faith agree, that there can be no conflict between divine revelation and human thinking; or that, even though some of them may transcend human reason, they are, none the less, guaranteed by faith, which is another source of knowledge. Under such circumstances, a number of alternatives are possible. The thinker may start out with the Christian world-view and prove it with the help of philosophy or some particular system of philosophy; or he may develop a system of philosophy of his own in harmony with Christian principles; or he may give his attention to problems that have no direct connection with theology. In any case, however, the dogma will be the regulative principle; the schoolman will not knowingly accept as true a proposition

contradicting an essential article of faith, at least not without offering some explanation leaving the truth of the dogma unimpaired. He may satisfy himself, in some way, that both propositions are true even though contradictory, but he will not drop the dogma.

The purpose of scholasticism determines its method; in so far as it consists in the demonstration of propositions already accepted, it will largely employ deduction. The nature of these propositions, and the need of proving them, account for several other characteristics of scholastic philosophy. The object of chief interest to the schoolman is the transcendent world, the world of God, the angels, and the saints; his thought is fixed not so much on things of this phenomenal order as upon the invisible realm of spirits. This explains the great importance of theology and the relative unimportance of the natural and mental sciences in scholasticism. It also explains the failure of the schoolmen to occupy themselves with an empirical study of subjects in which they had an interest, namely, psychology and ethics. They did not care so much about how the soul acts, as about its ultimate nature and destiny; and that, in their opinion, could not be learned by analyzing its contents. Nor did it seem possible to appeal to the world of experience for an answer to the questions of ethics. The highest good is the blessed life in God, that is settled; but there are no empirical means of finding the way to such a life: it is bestowed by divine grace upon those who do the will of God. Obedience to the will of God is the standard of right and wrong; what his will is cannot be discovered from an analysis of experience; it is a divine revelation. Scholastic ethics cannot abandon the field of theology.

Characteristics of Scholasticism

The truth is, the world about which the schoolman is chiefly concerned is not perceivable by the senses; he is dependent on his thinking for the knowledge of which he is in search. Logic, therefore, is a most important study for him, particularly deductive or syllogistic logic: the logic of the method which he employs in his pursuit of truth. In this field the schoolmen evinced great subtlety, not only in analyzing logical processes, but, especially, in developing conceptions which have become a part of our intellectual heritage,—for better or for worse. The

theory of knowledge did not make great strides with them: the possibility and the limits of knowledge did not, as a rule, strike them as problematical; they cherished an abiding dogmatic faith in the ability of reason to reach a certain kind of truth. The nominalists, to be sure, took up the question of the validity of knowledge, but the nominalists are no longer genuine schoolmen.

We can distinguish in scholasticism several important phases. We have already called attention to John Scotus Erigena, who may be regarded as the precursor of the movement, although his system is by no means a typical scholastic system. The period beginning with the ninth and ending with the twelfth century is largely influenced by Platonic conceptions; Platonism, Neoplatonism, and Augustinianism are the dominant philosophical forces. Ideas or universals are conceived, in the Platonic sense, as the real essences of things and as prior to things (*universalia sunt realia ante res*). This is Platonic realism, of which Anselm is the leading representative. The thirteenth century witnesses the rise of Aristotle's philosophy; Christianity allies itself with the great Greek thinker; universals are now conceived as real, not, however, as prior to things, but *in* them (*universalia sunt realia in rebus*). This teaching is called Aristotelian realism. The thirteenth century is the period of comprehensive systems; the leading thinkers being Albert the Great and Thomas Aquinas. The period of bloom is followed by a period of decline (from the scholastic standpoint) in the fourteenth century; universals are now regarded, not as the essences of things, but as mere concepts in the mind or as mere words or names (*nomina*): particular things alone are real (*universalia sunt realia post res*). This is nominalism. John Duns Scotus and William of Occam are the leaders of this movement, the consequences of which are destructive of scholastic presuppositions. For scholastic realism the universe is, as it was for Plato and Aristotle, an ideal universe, a system of ideas or forms, which are somehow mirrored in the phenomenal world as the essential qualities of things. It is a rational, logical world, and can, therefore, be thought out: the reason expressed in it is the same reason that reveals itself in the human mind. The forms, which make the objects of a

Stages of Scholasticism

class what they are, agree with our thoughts or universal notions. Now, if such universal ideas are merely thoughts in our heads or, worse yet, mere names, if there is nothing real corresponding to them, in things or apart from things, then we can have no knowledge, through them, of things, no rational knowledge of the universe and universals. Belief in the power of reason to reach truth is weakened or breaks down entirely. The philosophy of the Middle Ages, in other words, does not remain true to its scholastic principles, and scholasticism loses its vogue in the fourteenth century.

This means that the union between reason and faith, philosophy and religion, becomes less firm. The view that the doctrines of faith and the deliverances of reason agree, is gradually modified. It is held, either that some of the dogmas can be explained or rendered intelligible and that others transcend reason; or that none can be explained, that they are not objects of philosophical knowledge at all, that the truths of religion lie beyond the reach of reason, that reason cannot fathom them. The latter view amounts to the abandonment of scholasticism as such and leads to the deliverance of philosophy from servitude to dogmatic theology.

Sources

The sources on which the early schoolmen depended were Patristic literature, Greek philosophy, and, later, Arabian and Jewish speculations. The Greek philosophical material at their disposal, down to the middle of the twelfth century, consisted of Latin translations of: parts of Plato's *Timæus* (by Cicero and Chalcidius), Aristotle's *Categories* and *Interpretation* (by Boethius), Porphyry's *Introduction to the Categories* (by Boethius and Victorinus). Plato's *Meno* and *Phædo* were translated in the twelfth century, Nemesius, *On the Nature of Man,* in the middle of the eleventh. Of Latin philosophers they knew the writings of Boethius, Martianus Capella, Cassiodorus, Claudianus Mamertus; Victorinus, *On Definition;* Apuleius, *On Plato's Doctrine;* Pseudo-Apuleius, *Asclepius;* Macrobius; the Pseudo-Dionysius; Isidore of Seville. Aristotle's *Analytics* and *Topics* became known in translation after 1128, and the metaphysical and physical works about 1200.

Cf. Turner, *History of Philosophy,* p. 243; Ueberweg-Heinze, German edition, Part II, § 21, fine print, § 18, fine print. For special bibliography on Scholasticism see Ueberweg-Heinze, § 19, and Picavet, *Philosophies mediévales,* pp. xv-xxxiv.

22. John Scotus Erigena

At the end of the fifth century a collection of writings appeared which were falsely attributed to Dionysius the Areopagite, the supposed first Bishop of Athens, but which breathe the spirit of Neoplatonism. They aroused great interest and exerted a profound influence on medieval thought. Among those who came under the spell of their mystical pantheism was John Scotus Erigena, who translated them into Latin and reared a system of philosophy upon their foundation. He was born in Ireland in 810, educated in the Irish schools, and called by Charles the Bald to head the Schola Palatina at Paris. The date of his death is unknown, though he is supposed to have lived until 877. His philosophy is presented in his work *De divisione naturæ.*

Works in Migne, *Patrologia Latina,* vol. CXXII. (The works of the pseudo-Areopagite, in Greek and Latin, in Migne, *Patrologia Græca,* vols. III and IV; English translation by Parker.)

Poole, *Medieval Thought;* A. Gardner, *John the Scot;* monographs by Taillandier, Huber, Stöckl, Noack.

Scotus Erigena identifies theology and philosophy, authority and reason, faith and knowledge, holding that the truths of religion are rational truths. True religion and true philosophy are the same. Faith is not the mere credulous acceptance of a proposition, but such acceptance as is supported by reason; it is a rational, intelligent faith. The dogmas, he thinks, are truths which have been discovered by reason and transmitted by the Fathers of the Church. In order to justify his rationalistic position, Scotus is compelled to make frequent use of allegory in interpreting Scripture and the writings of the church authorities.

Faith and Knowledge

The theology of Scotus moves in the familiar atmosphere of Neoplatonism and Augustinian ideas. God is the beginning, middle, and end of all things; from him they come, in him and through him they exist, and to him they will return. He created the world out of nothing, or out of himself, the causeless first cause; or, as Scotus expresses it: Nature (as God) is an uncreated creator, the uncreated creating principle (*natura creans*). He created the world according to the plan or eternal patterns in his mind (the Logos), which is an expression of his being: his intelligence is responsible for the form and order in things, and continues to act on them; or, as Scotus puts it: Nature (as Logos) is a created creator, while nature (as the things produced by the Logos) is created and non-

Pantheism

creative. Everything, physical as well as mental, will return to God and be eternally at rest, for he is the ultimate goal of all creation; in this sense, Scotus calls nature (God) the uncreated and non-creating. God, as being, is Father; as Logos, or wisdom, Son; as life, Holy Ghost.

The universe is an expression or product of God's essence: everything,—his thought, the Logos, the phenomenal world,—proceeds from him. But the manifestation is not separate from God; it is not something cast off, but the living garment of God. God and his creation are one; he is in his creation and his creation in him. They are one and the same in the sense that he reveals himself in creatures; the invisible and incomprehensible One makes himself visible; he that is without form and quality gives himself form and quality. The universe appears to man as a divided, manifold, and plural universe, as a *theophany;* but, in principle, it is one single undivided whole, a whole in which all opposites are reconciled.

God, then, is immanent in the world; but he is also transcendent. That is, Scotus is unwilling to conceive the universe as exhausting or even diminishing the divine nature. It is only a partial unfolding, and there is infinitely more than is expressed. Just as one light can be seen and one voice heard by many persons without loss to the light or voice, so all things share in divine existence without depriving God of the fullness of his being. Consequently, whatever terms we may employ fail to describe him: he is beyond anything language can express, far beyond all the categories of thought. Yes, to predicate anything of him is to limit him; to affirm one quality is to negate another. He is superessential: he transcends goodness, deity, truth, eternity, and wisdom. In this sense he is the ineffable, incomprehensible, unknowable, undefinable principle, of whom nothing and yet everything (his expression, the way he manifests himself) can be predicated.

From this pantheistic doctrine it would follow that man, too, is a manifestation of the divine principle, but Scotus is not ready to draw the conclusion: it would imply human determinism and impute evil to God. Man is more than phenomenal body, he is the microcosm, a living spirit, and responsible for his fall from God selfward. God cannot be the cause of evil; there is

no idea of evil in God. Evil is but the privation of good, as Augustine had taught. Through a union with human nature, the Logos helps to redeem men, some being united with God, others brought back to their original love of God.

As all things come from God, so all strive to return to him: he is both the source and goal of their existence. The return to God is made possible by mystical exaltation, by contemplating his divine nature, by rising above sense and reason and keeping before our minds nothing but the incomprehensible transcendency of his being. In this state of mystical ignorance, we plunge into the divine darkness and lose ourselves in its life.

Mysticism

Scotus Erigena may be called a forerunner of scholasticism in so far as he aims to render the Christian conceptions intelligible by inserting them into a universal system, and in so far as his philosophy contains the germs of medieval realism. His thinking, however, was far too independent, and his teachings too little in harmony with orthodox views, to find a welcome among the Christian scholars of his time: it was not to be expected that they would prefer the pseudo-Areopagite to Augustine. More in accordance with the demands of the age was the work of his contemporary Paschasius Radbertus, who presented Augustinian thoughts in simplified form.

23. Problem of Universals: Realism and Nominalism

The appearance of John Scotus was but a momentary spark of light in the medieval darkness; after his death came another long interval of intellectual quiet. The teachers of the "seven liberal arts" continued to present the traditional dialectics in the time-honored text-books, and did not expend their efforts in the construction of theologies. They had their Augustine to fall back on, and, if pantheistically inclined, could revel in the pantheistic mysticism of the pseudo-Dionysius, whose writings were now available in a Latin translation by Scotus Erigena, or study the books of Scotus himself. In their logical studies, however, they were giving some attention to a question which had a bearing on the theory of knowledge and metaphysics; and which was destined

Early Schoolmen

to become the paramount issue in the history of scholasticism. The question was, as Porphyry phrased it in his *Introduction,* whether universals (genera and species) are real substances or exist merely in the mind, whether in case they are realities they are corporeal or incorporeal, and whether they exist apart from concrete sensible things or in them. It was the problem of the substantiality of the Platonic ideas and Aristotelian forms, a problem that had played such a significant part in the theories of the great Greek philosophers. The various logical treatises which had been transmitted to the period we are now considering, gave different answers to the question. Some declared for Platonic realism (universals are realities *prior* to things), some for Aristotelian realism (universals are realities *in* things), others for nominalism (universals are mere names for particular things, not prior to them, nor in them, but *after* them). Porphyry was a decided realist; Boethius, Macrobius, and Chalcidius took middle ground, while Martianus Capella was a clear and outspoken nominalist. John Scotus himself was a realist: he conceived universals as existing prior to particular objects as well as in them; the phenomenal world, as an expression of the thought of God, cannot exist apart from them. Such views were also held during the ninth and tenth centuries in more or less undeveloped form, but not definitely worked out until later. Many of the logicians, unacquainted with Aristotle's works, accepted the Aristotelian conception that particulars are the true realities, but interpreted it in a vague nominalistic sense; they did not make clear to themselves exactly what nominalism implied.

Barach, *Geschichte des Nominalismus vor Roscellin.*

To be mentioned in this connection are: Eric of Auxerre; his pupil Remigius; the work *Super Porphyrium* by a pupil of Rabanus Maurus,—all of the ninth century; Poppo, Reinhard, Notker Labeo (+1022), Gerbert (died 1003 as Pope Sylvester II), Fulbert (1029), Berengar of Tours (+1088). The interest in these subjects became so keen that some of the more conservative churchmen protested against the attempts of the dialecticians to subordinate the teachings of Scripture to the authority of dialectics; and Petrus Damiani (1007-1072) declared that logic should be *ancilla Domini,* the handmaiden of the Lord.

The full significance of the teachings of realism and nominalism and their bearing on metaphysics and theology were not

understood until the second half of the eleventh century,—not until they had been practically tried out, as it were. Roscelin* taught a pronounced nominalism and made it the basis of his interpretation of the Trinity. His argument was as follows: Particular substances alone exist, general concepts are mere names and words by means of which we define particular objects. Hence, there is no single reality corresponding to the general name God; the notion of the Godhead, which we apply to the Trinity, is a mere name or word. There is not one substance God, but three particular substances or persons, who, however, are equal in power.

Roscelin's Nominalism

This view was in direct opposition to the official trinitarian doctrine and aroused great indignation and opposition. The Council of Soissons (1092) condemned Roscelin's interpretation of the Trinity and compelled him to recant. Although nominalism as such was not included in the condemnation, it lost prestige and did not reappear until the fourteenth century. The schoolmen adopted, instead, Platonic realism, which, though modified and developed in various ways, remained the dominant conception throughout the twelfth century. It was well suited to ward off just such attacks as Roscelin had made on the Trinity, and to give rational support to the entire Church doctrine. If universals are real, if they are not mere tags or labels for groups of particular things, then the notion of the Trinity can mean more than the sum of three persons. The dispute over the question of universals was more than a logical quibble; far-reaching metaphysical and theological implications were involved in the answers. The view that our general concepts, our logical thoughts, are not mere subjective ideas in the mind, but have a reality of their own apart from the mind, implies that the universe is rational and knowable. It implies that truth is not mere subjective opinion, but that there is objective truth, universally valid truth, and that it is the business of philosophy to realize it in conceptual thought. It implies that there exist, besides particular individual phenomena which arise and pass away, permanent realities, which never die. The scholars of the Church found in this basal conception a splendid buttress upon

Meaning of Realism

* See Picavet, *Roscelin.*

which to rest their entire intellectual and ecclesiastical structure. God is such a universal idea, superior to and outlasting mere phenomenal existence; mankind is such a universal reality, which was corrupted in Adam and made whole again in Christ; the Church is such an abiding entity over and above the temporal members who compose it: an ideal whole not affected in its essence by the coming and going of its parts. We see, it was not by a mere whim that the orthodox churchmen shelved nominalism and rallied around the standard of Platonic realism: they chose the doctrine which gave the Christian world-view and scheme of life a meaning in their eyes.

DEVELOPMENT OF SCHOLASTIC REALISM

24. Anselm of Canterbury

Anselm (1033-1109), Archbishop of Canterbury, opposes the nominalistic heresies of Roscelin in a system of thought based on Platonic and Augustinian principles. He is the true type of the schoolman; firmly convinced of the truth of the dogmas and yet possessed of a strong philosophical impulse, he seeks to prove to reason what has to be accepted on authority. He bravely includes in his attempt to rationalize the faith not only such general propositions as the existence of God, but the entire church scheme of salvation, the Trinity, the Incarnation, and the redemption of man. We must believe the Catholic doctrine,—that is beyond cavil,—but we should also try to understand what we believe, understand *why* it is true; remembering always, however, that where intelligence fails us, it behooves us reverently to bow to faith.

Anselm

Among Anselm's works we mention: *Monologium; Proslogium; Cur Deus homo?* These and the monk Gaunilo's criticism of Anselm's ontological argument, translated by S. N. Deane.

Church, *St. Anselm;* Rigg, *St. Anselm;* Rule, *Life and Times of St. Anselm;* Père Ragey, *Histoire de St. Anselme,* and *St. Anselme professeur;* de Vorges, *St. Anselme;* also books by Hasse, Rémusat, Möhler (transl.).

Anselm bases his celebrated proofs for the existence of God on the Platonic conception that universals have an existence

independent of particular objects. In his *Monologium* (written about 1070) he makes use of the cosmological argument, which had already been employed by Augustine, and which need not be repeated here. In his *Proslogium,* however, he offers another proof, also based on Platonic realism, the so-called ontological proof, with which his name has become linked in the history of thought. This proof consists in deducing the existence of God from the concept of God, in showing that the very idea of God implies his existence. The idea of God is the notion of something, greater than which nothing can be thought, that is, the idea of a perfect being. Now, if God did not exist, this idea would not be the idea of the greatest thing thinkable; there would be something greater still. The idea of a being having existence is the idea of a more perfect being than the idea of one having no existence. Hence, God as the most perfect being must exist. That is what Anselm means by saying the perfection of God implies the existence of God.

This conclusion, however, does not follow from Anselm's premises. His reasoning proves no more than that when we think of a being as existing, we are thinking of a being that is more perfect than a non-existent being. The notion of an existing being is the notion of a being that has more qualities than a being conceived as not having existence. He does not prove that God exists, but merely that the idea of an existing God connotes or means more than a mere subjective idea of God. And looked at logically, this is true; but it does not necessarily follow from the *notion* of a perfect being, which notion carries with it the idea of existence, that such a being exists. It must not be forgotten, however, that the ontological argument will seem cogent to any one accepting the realistic presupposition that universals have an extra-mental reality.

The fallacy in Anselm's argument was exposed by the monk Gaunilo in his anonymously published book *Against the Reasoning in Anselm's Proslogium.* The being of God in the mind, he declares, is the same as the being of any other thing in the mind, that is, so far as it is thought. In the same way in which Anselm proves the existence of God, one might prove the existence of a perfect island. Thomas Aquinas more than a hundred years later also subjected this argument to careful analysis.

It was, however, frequently used in scholastic philosophy,—for example, by William of Auxerre and Alexander of Hales.

In the book *Cur Deus homo?* (written 1094 and 1098) Anselm offers his theory of the scheme of redemption, which he conceives as a conflict between the justice and mercy of God. The fall of Adam brought with it the sin of the entire human race. God's justice demands satisfaction, but his love prevents him from inflicting the punishment or suffering necessary to set things right. Christ, the God-man, who is innocent of sin, sacrifices himself for man, thereby satisfying the demands of justice.

The application which Roscelin had made of nominalism emphasized the interest in the question of universals among his contemporaries and successors. Anselm criticises the nominalistic view from the standpoint of realism, which, as we have pointed out, is admirably suited to his orthodox purpose: universals are real; the particular objects constituting a class form a real unity; "the many men in the species are one man," he says; "the many persons [in the Trinity], each single one of whom is perfect God, are one God." The question arises, What is the relation of this universal to the particular objects; what part do individuals play in the scheme? William of Champeaux (1070-1121) holds that the genus and species to which an individual belongs are completely present in every individual, and individuals differ from one another merely in their accidental properties, *i.e.*, they do not differ *essentially* at all. Abelard pointed out to him that, in that case, the same substance would have different, and even contradictory, properties; it would, for example, be in different places at the same time. If human nature is completely in Socrates, it cannot be in Plato; if, however, we say it is also in Plato, then Plato must be Socrates, and Socrates must be in Plato's place as well as in his own. William afterward modified his theory; he had not intended to deny the essential difference of individuals, and most likely did not see the difficulties in which the realistic interpretation of logical categories involved him.

Contemporaries

According to the work *De generibus et speciebus,* the author of which is unknown, but which is referred to the early part of the twelfth century, the universal inheres, not in the individual

as such, but in all the individuals of the same species. Thus, the common element which inheres in all the particulars of a class is matter; that which differentiates it from other particulars of the same class, its individuality, is the form.

25. Peter Abelard and the Schoolmen of the Twelfth Century

Abelard

The most interesting figure among all these schoolmen is Peter Abelard (Abælardus or Abeillard), who was born, 1079, in Pallet, and died in Paris, 1142, after many conflicts with the Church. He was a man of remarkable talents and the most brilliant teacher of his time. He employed a method which consisted in giving, after every important thesis discussed, the views of opposing authorities (*dicta pro et contra*) and leaving the solution of the problem to the reader himself, with suggestions of the principles for deciding the question. His pupil Peter the Lombard followed this method in a textbook on *Theology* which became the model for all succeeding medieval works of the kind.

Among Abelard's works are: *Epistolæ; Introductio ad theologiam; Ethica; Sic et non; Dialogus inter philosophum, Judæum et Christianum; Historia calamitatum* (autobiography). Edition of works by Cousin, 2 vols.; theological writings in Migne, vol. CLXXVIII. McCabe, *Abelard;* Rémusat, *Abélard,* 2 vols.; Hausrath, *Abelard;* Th. Ziegler, *Abelard* (*Zeller-Festschrift,* 1884).

Abelard seems to occupy middle ground between the nominalism of Roscelin and the original form of William's realism (both had been his teachers), but does not offer a definite solution of the problem. He opposes the view that universals are real *ante res* except in the mind of God; we cannot predicate a thing of a thing, and we can predicate a universal of many things, hence a universal cannot be a thing. Nor is the universal a mere word as such; it is a word only in so far as it is predicated of a class of objects, that is, in relation to the objects denoted; universals are, therefore, not words (*voces*) but *sermones.* Perhaps he meant by this that universal ideas, which connote the properties common to a class of objects, are concepts in the mind, and that the terms or words used to express such

concepts are *sermones.* This would be the view called *conceptualism,* which has been given as Abelard's meaning; but he does not seem to have worked it out. He was chiefly interested in showing that universals are not entities apart from things, as well as that there are essential differences between things. It is not unlikely that Abelard was in doubt himself as to the correct view; his great admiration for both Plato and Aristotle perhaps made him feel that both were right. What he particularly desired to emphasize was that our thinking should be of things, that the purpose of speech is to express thought, but that thoughts must conform to things.

In his work on *Theology,* which was condemned at the Council of Sens, in 1140, Abelard emphasizes the need of examining our faith in order that it may not be a blind faith, and to this end he recommends training in logic and the use of logical methods in theology. Reason should precede faith; we ought to see the reasonableness of it. On the other hand he evidently believes that a strict logical proof of the dogmas cannot be offered, and makes their acceptance an act of free will, for which we are to be rewarded in the future life by a knowledge of the grounds of faith. This shows how firmly Abelard was held in the grip of the scholastic method; in spite of the independence of his thought and his respect for reason, his attitude is essentially scholastic: reflect upon the dogma as profoundly as you can, do not accept it until you have inquired into its reasons, but after you have doubted and inquired, and it still does not appeal to you, make up your mind to accept it nevertheless, for accept it you must.

The part of his *Theology* which aroused the greatest opposition and led to the condemnation of the book was his doctrine of the Trinity. In the Trinity, he said, the Father is the One, or Goodness; the Son is the Logos, or the mind of God (νοῦς), containing the ideas; and the Holy Ghost is the world-soul. He also characterizes the three persons as the power, wisdom, and good will of God.

In his ethics Abelard emphasizes the importance of the good will. The rightness and wrongness of an act lie not in the deed, but in the intention of the agent; the act as such is indifferent, as are also natural inclinations to evil, which are due

to original sin. "God considers not what is done, but in what spirit it is done; and the merit or praise of the agent lies not in the deed, but in the intention." Sin consists in our consent to evil recognized as such by us,—in willing what we know to be wrong,—and is, therefore, an act of free will. Morality, in other words, is a matter of conscience. So long as the agent acts in accordance with his conscience, in conformity with what he thinks is right, he may err, but he does not sin. His act is truly virtuous, however, only in case what he thinks is right *is* right, in case his subjective conviction agrees with objective principles of right. Abelard has in mind the distinction between subjectively moral and objectively moral acts. In a broader sense, everything is sin that is contrary to what is right, but in the narrow sense, only the conscious and voluntary pursuit of evil is sin.

But why is it sinful to consent to what is thought to be wrong? Because such consent implies a downright contempt of God, a disobedience of the divine will, a violation of his commands, and that is the greatest of all sins. A good will is one that is prompted by the love of God and acts in obedience to divine command. Such commands themselves Abelard regards as arbitrary deliverances of divine freedom; they differ for different times, but obedience to them is moral and is required. Here, again, we see how, in spite of occasional symptoms of independent thinking, the spirit of scholasticism will out at last.

The School of Chartres

The school of Chartres, of which Bernard of Chartres (died between 1124 and 1130) and his brother Thierry (+1150) were the heads, and which counted among its followers Bernard of Tours, William of Conches (+1154), Gilbert of Poitiers (+1154), Walter of Mortagne (+1174), and Adelard of Bath, studied and sought to develop the Platonic doctrines, so far as they were known at that time, sometimes in connection with Aristotle's views. Aristotle's *Analytics, Topics,* and *Fallacies* first became known to the schoolmen in Latin translations (1128). The school of Chartres exhibited a keen interest, not only in dialectical studies, but also in astronomy, mathematics, medicine, physics, physiological and psychological questions, books on which were being translated from the Arabic. A realism similar to Plato's was accepted by those who discussed the logical problems: universals, or concepts of genera and species (according to Bernard of Tours, also notions of particular things), exist in purity in the divine mind. To them matter in some way owes its form. Bodies are said to subsist in them as water exists

in the bed of a river; or "native forms" are introduced to explain bodies,—forms which are related to the pure ideas in the divine mind as a thing is to its pattern;—or the nature of the relation is left undetermined. Material objects manifest the form or idea obscurely. The intellect can attend to the forms or common qualities in bodies by abstraction. Cf. Ueberweg-Heinze, *op. cit.*, § 25.

The *Sentences*

We have called attention to the method employed by Abelard in his teaching and writings, that of stating the opinions (*sententiæ, sentences*) of different authorities on the subjects under discussion. The method was not a new one; it had been followed in a number of text-books of theology, which were called *Sentences or Summaries of Sentences* (*Summæ sententiarum*); among others in Robert Pulleyn's (+1150) *Sententiarum libri octo* and Hugo of St. Victor's *Summa sententiarum.* (The writers of such books were also called *Summists.*) Peter Lombard (+1164), making good use of all these works, published a book *Libri quatro sententiarum,* which formed the basis of theological instruction for centuries, and won for its author the title *magister sententiarum.* The four books of this work discuss: God as the absolute Good; creatures; incarnation, redemption, and the virtues; the seven sacraments. Other Summists of this period are Robert of Melun, Hugo of Rouen (+1164), Peter of Poitiers (+1205), and Simon of Tournai. Alain of Lille (+1203, Alanus ab insulis) presents the subjects taken up in the *Sentences* in the form of a dogmatic system. In his *De arte fidei catholicæ* and *Regulæ theologicæ* he employs the mathematical-deductive method, attempting to base theology on fundamental principles. In spite of his rationalistic ideal, however, Alain frequently betrays skeptical and mystical tendencies. The doctrines of the Church are more certain than all our worldly sciences, but not absolutely certain. Faith, too, has its merit; if they were absolutely certain, there would be no merit in believing them.

John of Salisbury

The Englishman John of Salisbury (c. 1115-1180), to whom we are indebted for information concerning many schoolmen of his age, criticises the entire scholastic movement as dealing with fruitless controversies, and demands the reform of logic in his *Metalogicus.* He is in favor of realistic studies in education, and of the absolute independence of the Church from the State, in his book *Policraticus.* All knowledge, he thinks, ought to be practical; whatever does not help us either in acting on nature or in doing our duty, is useless. Our true good lies in a pious life; we should believe in the doctrines of the Church, even though we cannot prove them.

Works edited by Giles, 5 vols., and by Migne, vol. CXCIX; *Policraticus* by Webb, 2 vols. Schaarschmidt, *Johannes Saresberiensis.*

26. Mysticism and Pantheism

The philosophical-theological movement which we have been describing has as its aim the rational interpretation of the Chris-

tian universe,—of the universe as the orthodox Churchman conceives it. The presupposition is that the purpose, nature, and operation of God can be made intelligible to reason, that a system can be constructed on the basis of the Christian articles of faith. We have here a dogmatic rationalism or intellectualism, regulated by the official church doctrine. Scholasticism as a completely rationalized church theology, however, never gained undisputed possession of the Christian world; alongside of it, and often within it, we discover an anti-theological current, a kind of reaction against the over-rationalization of the faith, a yearning for a more practical expression of the religious life. For this movement religion is not merely philosophy of religion; it finds its satisfaction not in theorizing about the faith, but in *experiencing* it; its chief desire is not to prove the existence of God and to define him, but to enter into other than intellectual relations with him. This mystical line of thought represents the conservative Augustinian element in Christianity; and it is a fact that the leaders of the first school of Mystics were monks in the Augustinian cloister of St. Victor at Paris.

Mysticism

According to the mystics, God is not reached by dialectics, or logic, but in mystical contemplation; and it is the function of theology to tell us how such a state may be realized. Laying stress, as they do, upon the inner faith of man, upon the experiences of the soul, they naturally become interested in a more empirical study of the soul than had been customary. Mysticism is practical theology, theology teaching the art of mystical contemplation. But the mystics have their rational theology as well; in it, however, the superrationality of the faith is emphasized. As the school develops, mystical contemplation is accentuated and even exaggerated: for Richard of St. Victor it is far superior to knowledge; according to Walter, logic is the source of all heresies: faith not only transcends knowledge, but contradicts it. Walter wrote a book *Against the Four Labyrinths of France* (*In quattuor labyrinthos Franciæ*), meaning Gilbert, Abelard, Peter the Lombard, and Peter of Poitiers, all of whom he regarded as heretics.

The chief representatives of orthodox or church mysticism are Bernard of Clairvaux (1091-1153), Hugo of St. Victor (1096-1141),

Richard of St. Victor (+1173), and Walter of St. Victor. The mysticism of the twelfth century was continued by Thomas Gallus (1216) and Bonaventura (1221-1274). Meister Eckhart (1260-1327), Johannes Tauler (1300-1361), and Johannes Ruysbroek (1293-1381) are pantheistic mystics, whose teachings are condemned by the Catholic Church as heretical.

Works in Migne's collection. Translation of Bernard's works, 4 vols., by Eales.

Vaughan, *Hours with the Mystics,* 2 vols.; Gregory, *Introduction to Christian Mysticism;* R. B. Jones, *Studies in Mystical Religion;* Svanson, *Christian Mystics;* von Hugel, *The Mystical Elements of Religion,* 2 vols.; Delacroix, *Études de l'histoire et de psychologie du mysticisme;* the works of Görres, Helfferich, Noack, Preger, and Schmidt.

The highest goal for the mystic is " the mysterious ascension of the soul to heaven, the sweet home-coming from the land of bodies to the region of spirits, the surrender of the self in and to God." The road to this goal leads beyond sense-perception and even conceptual thought to contemplation, in which the ideal object appears to the soul in its immediacy. There are three stages of knowledge: *cogitatio, meditatio,* and *contemplatio;* the very highest stage is superrational and præterrational, bearing the mind to the profoundest mysteries of religion. In its most exalted form (*alienatio mentis*), the individual consciousness comes to rest in contemplation. All that man can do is to prepare himself for this mystical " plunge into the ocean of infinite truth," and then to wait for it: it is an extraordinary favor of God.

Pantheism

The ideal of the orthodox thinkers of the twelfth century was to rationalize the faith, and to this end they had recourse to logic and metaphysics. Their undertaking rested on the desire to understand the things which the Church taught and they believed. The traditional theology based itself upon realistic preconceptions, which seemed to bring the results of philosophical thought into harmony with the doctrines of the Church. But even when men reason from the same premises, different conclusions often follow; their results do not always agree. This is what happened constantly in the dogma-making period of Christianity; and it happened every now and then during the ages following. John Scotus, Roscelin, and Abelard did not succeed in making their thoughts square ex-

actly with the official requirements. Among the heresies which attracted thinkers, pantheism had never quite lost its power: it found expression in Sabellianism, in the pseudo-Dionysius, and in Scotus Erigena; and the Mystics were not far from it. Toward the close of the twelfth century, it appeared again and made some progress. Its chief representatives were: the Abbot Joachim of Floris (+1202), Amalric or Amaury of Bennes (+1206), who taught theology at Paris, and David of Dinant (died *circa* 1200), of whose life we know very little. These pantheists reached their conclusions quite simply by deducing what they regarded as the logical consequences of Platonic realism. If universals are real, then the highest universal, God, must be the most real being and everything else an expression of the divine essence (just as the highest genus in logic comprehends all possible species and individuals). Amalric seems to have taught, with John Scotus, that the world of changing and divisible phenomena, which has come from God, will ultimately return to God and abide in him as one unchangeable individual.

Such pantheistic teachings found favor with many, and a sect of Amalricians was formed that spread over Switzerland and Alsace. The Church condemned the doctrines, exhumed the body of Amalric, who had been forced to recant before his death, and eradicated the sect. In 1225 it condemned Scotus Erigena as a heretic. In 1210 a provincial council at Paris prohibited the *Physics* of Aristotle, which had found its way at last into the Western world in a Latin translation from the Arabic. All this is evidence of the growth of a spirit of independence. The human mind was again getting ready to try its wings.

27. Symptoms of Unrest

We find, then, at the end of the twelfth century, besides the predominant scholastic philosophy, a number of opposing tendencies. Some of the more conservative orthodox churchmen are opposed to the traditional system as laying too much stress on dialectics: for them it is not strict enough. Some thinkers, more independent than the schoolmen, reach conclusions antagonistic to the official Christian scheme of thought; for them it is too strict. Others assume

Opposition to Scholasticism

a skeptical attitude with respect to all attempts to construct a rational theology, either because they distrust reason as an ally of an inner living faith or because the prevailing philosophical discussions do not seem to them to have any bearing on the real practical problems of the Church. In many quarters the desire is felt for further knowledge concerning the relation of general ideas or universals to the world of particular objects; this desire develops into an interest in natural science, which is fed by Latin translations of Arabian scientific books.

Organization of Learning

There were symptoms of unrest; the problems and difficulties were multiplying, and many were beginning to see how hard it was to demonstrate not only the positive dogmas of the Church, but the general propositions of theology as well. In spite of their bold syllogistic constructions, schoolmen often confessed that the conclusions, though more certain than any worldly knowledge we might possess, still fell short of absolute rational certainty. And yet the fundamental conviction remained that the universe was a rational universe, that God acted intelligently and for the best, that there was truth if only one could make it out. But the goal of the search was fixed; it was sacrilegious and dangerous to tamper with the dogmas; there stood the powerful organization of the Church with its awful spiritual and temporal weapons, ready to discipline those who wandered too far afield. The intellectual activities of Christendom, too, were gradually made corporate and organic; out of the cathedral and monastery schools grew the universities, or corporations of scholars engaged in the study of theology and philosophy, medicine and law; and certain monastic orders formed compact philosophical schools, which, like the old Greek schools, continued for centuries to teach their favorite doctrines. Paris, the great international university, which owed its existence to the union of the theological school of Notre Dame and the school of logic at St. Genevieve, received its charter in 1208. The Dominican and Franciscan orders became the great teaching orders of the thirteenth century, nearly all the distinguished teachers and writers of that age belonging to the one or the other. These agencies, the Church, the universities, and the monastic orders, coöperated in the work of securing the traditional doctrines of Christianity. The business of the individual thinker was

to make reason and faith agree: this was not philosophy, but it was the task made necessary by the preconceptions of the times, and it was the path of least resistance.

The age was not ready to give up the dogmas nor was it competent to construct a system of thought independently of religious and philosophical tradition; an adequate knowledge of the facts of experience was lacking. Empirical science was at a low ebb, modern scientific methods were unknown; the age was a book-age, and the books were wanting from which such a knowledge might be obtained. Paulsen makes the statement that if our modern scientific text-books had suddenly been showered upon the Greeks, they would not have known what to do with them. The remark is applicable to the Middle Ages: they, too, had to work out their own salvation.

Cf. histories of universities mentioned p. 137; Turner, *op. cit.*, p. 321; Graves, *Medieval Education,* chaps. viii, ix, and bibliography given there.

Discovery of Aristotle

It was during the period we have been describing that a new world began to open up to Western Christendom, and that a new impetus was given to the study of scholastic philosophy. Greek works on mathematics, astronomy, and medicine; the writings of Aristotle and some of his Greek commentators (Alexander of Aphrodisias, Themistius); and the most celebrated Arabian and Jewish philosophers and commentators of Aristotle were becoming known in Latin translations from the Arabian texts.* These books were eagerly studied and at first interpreted, after the Arabic fashion, in the spirit of Neoplatonism.

The new Aristotelian literature was viewed with suspicion by the Church, partly, no doubt, on account of the odor of pantheism with which its Arabian expounders had surrounded it. At any rate, we find that the study of Aristotle's *Physics* and *Metaphysics* is expressly prohibited by the statutes of the University of Paris in 1215, and that Pope Gregory IX again forbids the use of the *Physics* in 1231,—until the work can be ex-

* Around the year 1150 John Avendeath and Dominic Gundisalvi translated the chief works of Aristotle and Jewish and Arabic books from the Arabian into Latin. Nearly all the works of Aristotle, in such translations, became known during the years 1210 and 1225.

amined and expurgated. These prescriptions, however, do not seem to have had more than a passing effect; the books were read, and the foremost scholars of the period began to write commentaries on them. Translations from the original Greek versions of the chief works of the great Peripatetic were made later on in the century, and the genuine Aristotle came in time to be distinguished from the Neoplatonic counterfeit of the Arabians.

Robert Greathead, Bishop of Lincoln (+1253), had translations made, especially of the *Nicomachean Ethics* (1250). William of Moerbecke (+1281) translated the works (including *Politics*). Henry of Brabant translated certain works (about 1271). In 1254 the *Physics* and *Metaphysics* became parts of the curriculum of the University of Paris, the same university that had condemned the writings forty years before. Aristotle came to be regarded as "the rule of truth, as it were, in which nature demonstrated the highest perfection of the human mind," and as "the precursor of Christ in natural things as John the Baptist had been in matters of grace." Great encyclopedias appeared, based on the new philosophy, composed by Gundisalvi of Segovia (twelfth century), William of Auvergne (+1249), Robert Kilwardby (+1278), and the greatest of all, Vincent of Beauvais (+1264).

CULMINATION OF SCHOLASTICISM

28. Arabian Philosophy

Western Europe first became acquainted with the Aristotelian writings through translations from the Arabian texts, and through the systems and commentaries of Arabian philosophers who interpreted Aristotle in the spirit of Neoplatonism. The followers of Mohammed, in their zeal to convert all unbelievers to the teachings of Islam, had set out to conquer the world (632); by the year 711 Syria, Egypt, Persia, Africa, and Spain were in their hands. In Syria the scholars of the new militant religion became acquainted with the Aristotelian philosophy, which, tinctured with Neoplatonism, had for centuries formed the chief object of study in the Eastern Empire, among Christian theologians and heretical philosophers alike, and had been carried to Syria by the exiled Nestorian sect. Arabic translations were made, first from the Syrian, later from the Greek texts, not only of Aristotle's works, but of the works of commentators like Alexander of Aphrodisias, Themistius,

Greek Sources

Porphyry, and Ammonius, as well as of Plato's *Republic, Timæus,* and *Laws* (876). The Arabians also studied translations of Greek works on mathematics, astronomy, medicine, and other natural sciences, and made valuable contributions to some of these fields. Aristotle came to the Arabian scholars in the Neoplatonic dress in which his later commentators had clothed him; it was owing to this fact, as well as to the existence of pseudo-Aristotelian books of Neoplatonic origin (which masqueraded under his name), that little difficulty was found in interpreting the Peripatetic philosophy in terms of the emanation-theory.

DeBoer, *History of Philosophy in Islam,* transl. by E. Jones; Shahrastani, *History of Religious and Philosophical Sects;* Goldziher, *Islam and Jewish Philosophy* in *Allgemeine Geschichte der Philosophie,* mentioned p. 4; M. Eisler, *Jüdische Philosophie des Mittelalters,* 3 vols.; M. Joel, *Beiträge zur Geschichte der Philosophie,* 2 vols.; Neumark, *Geschichte der jüdischen Philosophie;* works by Munk and Dieterici. Bibliographies in Goldziher and Ueberweg-Heinze, Part II, §§ 28, 29 (which contain good accounts of Arabian and Jewish philosophy).

With the help of this literature the scholars of Islam succeeded in placing their religion on a philosophical basis and creating a scholastic system not unlike, in its aim, to that of the West. With them as with the Christians, the pivotal problem was the relation of divine revelation to human knowledge and conduct; the purpose of their science was to bring the teachings of the Koran into harmony with the deliverances of reason, or to rationalize the faith.

Different Schools

The questions which, at an early date, led to controversy among them were the relation between divine predestination and human freedom, and the relation of the unity of God to his attributes. The orthodox party accepted the teachings of the Koran without any attempt to justify them: there is one omnipotent, omniscient God, who has predetermined everything. Objections were urged against the traditional orthodox views by dissenters, or free-thinkers (called Mutazilites), who made reason the test of truth. These thinkers came to feel the need of a philosophy, and so drew upon various Greek theories in support of their views, without, however, at once constructing a system of their own. In the tenth century there arose within the rationalistic

school a reaction against philosophy and in favor of orthodoxy; both the Aristotelian conception, with its passive contemplative God and its eternal universe, and the Neoplatonic emanation-theory were rejected as out of harmony with the Islam notion of a personal Creator of the world. The Asharites, as these reactionaries were called (after their leader Ashari, 873-935), showed a great preference for atomism, with the essential principles of that theory left out. Atoms were conceived as continuous creations of God while the notions of causation and the uniformity of nature were discarded in order to save the absolute, arbitrary power of God and the possibility of miraculous interference.

The part of the rationalistic school which remained faithful to philosophy developed a number of systems, in which Aristotelian and Neoplatonic, sometimes Neopythagorean, elements are combined in varying proportions. Some of these emphasize the Neoplatonic aspects, bringing the practical, ethical, and religious teachings to the front; others accentuate the Aristotelian thoughts, insisting on the study of logic as a preparation, and construct their metaphysics on what seems to them a natural-scientific basis.

A typical example of Arabian Neoplatonism is the *Encyclopedia of Sciences,* a series of fifty-one treatises, which was produced in the tenth century by members of a religious-philosophical order called the Brothers of Sincerity, and which exercised great influence throughout the Mohammedan world. This popular society, which reminds us of the old Pythagorean order in Italy, had as its ideal the perfection of the human soul in the likeness of God by means of philosophical study. Its ethical-religious teaching was based on the Neoplatonic emanation-theory, according to which all things flow from, and return to, the absolute unity of God. Man, the copy of the universe, the microcosm, must free himself from the bondage of matter and return, purified, to the source from which he sprang. The *Encyclopedia* culminates in occultism; the final part is given over to serious discussions of astrology, magic, alchemy, and eschatology.

In the book on the *Refinement of Morals,* Ibn Miskaweihî (+1030) presents an ethical system which is a curious mixture

of Platonic, Aristotelian, and Neoplatonic ideas. In *Sufism* the mystical side of Neoplatonism is emphasized: the phenomenal world is an illusion and matter the lowest emanation of Deity; by asceticism and ecstasy the soul penetrates the veil of illusion and is merged in God. Buddhistic influences are observable in that form of Sufism which teaches the absolute absorption of the individual soul in nothingness.

Rationalists

The other branch of the Arabian school, the chief representatives of which in the Orient are Alkindî (+ 870), Alfârâbî (+ 950), and Avicenna (+ 1037), insist on the importance of logic as an introduction to the study of philosophy, and emphasize the necessity of grounding metaphysics on a study of nature. But their conception of natural science is extremely crude, being shot through with fantastic notions, religious superstitions, and occult theories of all kinds. The interpretation of dreams, theurgy, alchemy, astrology, and natural magic are regarded by these men of science as legitimate parts of natural science; they believe in astral spirits, which they identify with the angels of the Koran and the Bible, and nearly all of them are mystics. The only subjects not infected with superstition are logic and mathematics. That these thinkers, for the most part, failed to grasp the real teachings of Aristotle and interpreted them as Neoplatonic, is not remarkable: it was no easy task to discover the genuine Aristotle under the mass of Neoplatonic commentaries and interpretations under which he had lain buried for centuries.

In their logical studies, the Arabian philosophers generally exhibit good judgment and dialectical skill. They too are interested in the question which formed so important a part of Christian scholasticism, the question of universals. According to Alfarabi, universals have no existence apart from particulars, they are in things; but even individual forms have a place in the mind. Avicenna, likewise, holds that they do not exist as separate entities *prior* to things, except in the mind of God; in our own minds they exist *after* things, as abstractions from particulars; and they exist also *in* things, but not unmixed with their accidents.

In their metaphysics, Alfarabi and Avicenna make concessions to the demands of their religion. They try to weaken the Aris-

totelian notion of an eternal universe by making a distinction between necessary and potential existence. The eternal original being, which with Aristotle they conceive as intelligence (the primary and only direct product of God), is necessary and uncaused; everything else depends for its existence on this cause and is conditioned,—that is, is potential in God. The evolution of a world from its ground is a process of emanation. For Alfarabi, matter is a phase of this process; for Avicenna, matter is eternal and uncreated. But according to both, creation means the actualization or realization of the potential in matter; form is somehow given to matter by God; God seems to place forms, as potencies, in matter and then to realize them, or bring them out, by means of his active intellect. This is, according to Alfarabi, a process in time; with Avicenna, the emanation of the lower from the higher is an eternal process, on the ground that the effect must be simultaneous with the cause, which is eternal; hence, the universe is eternal.

One of the numerous emanations from God is active or creative thought, the spirit of the lunar sphere, which gives everything the form it has been prepared to receive. And it is through this universal active intellect that the potential intellect is realized, or knowledge brought out in man. According to Alfarabi, the human intellect, thus actualized, becomes a simple immortal substance.

The goal of philosophy is to know God and to be like God, so far as this is possible. It can be reached, according to Avicenna, by instruction as well as by divine illumination; Alfarabi, however, regards a mystical union of the soul with God as "an old wives' tale."

Downfall of Philosophy in the East

Arabian philosophy comes to an end in the Orient at the turning point of the eleventh century. Algazel (+1111) attacks the teachings of the philosophers in the interests of the popular religion, in his book, *Destruction of the Philosophers,* and denies the competence of philosophy to reach truth. He misses in the systems the doctrines especially emphasized by Islam orthodoxy: the theory of creation, the doctrine of personal immortality, and the belief in the absolute prescience and providence of God,—the view that God knows and foresees all

the minute occurrences of life and can interfere with them at any time. The appearance of Algazel's work not only silenced the philosophers, but led to the burning of their books by the public authorities.

Arabian philosophy, however, continued its existence and flourished in the Moorish caliphate of Spain, particularly at Cordova, the seat of a celebrated school at which Mohammedans, Jews, and Christians studied without interference. The most important among the Arabian thinkers in the West are: Avempace (+1138), Abubacer (+1185), and Averroës (Ibn Roshd, 1126-1198). These men were physicians as well as philosophers. In the greatest of them, Averroës, whose ideas influenced Christian scholars, Arabian thought reaches its culmination.

Spanish School

Avempace denied individual immortality, regarding as immortal only the universal intellect which manifests itself in particular human minds. He also opposed mysticism; the ideal is, indeed, to rise beyond the lower stages of soul-life to complete self-consciousness, in which thought becomes identical with its object, but this goal is reached not by ecstasy, but through a gradual and natural development of our mental functions. With this Abubacer largely agrees in his philosophical romance, in which he describes the gradual evolution of the natural capacities of a human being, living alone on a desert island, and his final union with God by means of asceticism and ecstasy.

Averroës had a high opinion of Aristotle, regarding his intellect as the perfection of the human mind. His chief ambition was to reproduce the true Aristotle, an ambition, however, which he can hardly be said to have realized. The task was impossible for him,—partly owing to the Neoplatonic preconceptions with which he approached the interpretation of the great Greek's teachings, partly because of the desire, characteristic of nearly every medieval philosopher, to accommodate his theories to the demands of his religion. At any rate, Averroës accepts the fundamental dogmas of the corrupted Aristotelianism of Islam: the emanation-theory and the doctrine of the universal intellect.

Forms, he teaches, are implicit in matter; not superadded, as Alfarabi and Avicenna had held, but unfolded, or evolved,

or realized, by the action of higher forms, of which the highest is the divine intellect. Creation, in the ordinary sense, is therefore rejected. There is one universal active mind, which influences particular individuals and brings them to knowledge. This is explained by Averroës in the following manner: Individual souls are naturally predisposed to such influence; by the action of the universal active mind the predisposed soul becomes a potential mind and so has implicit intelligence. The union of the universal mind with a soul capable of receiving it, yields an individualized soul: just as the sunlight is individualized or particularized by striking a body capable of receiving light, so a soul, capable of receiving intelligence, is individualized by the entrance into it of the universal spirit. By further action of the universal mind on this individualized soul, the knowledge implicit in the latter is made explicit or realized; it rises to the highest self-consciousness, and in this form becomes one with the universal spirit or absorbed in it (mysticism); it becomes a phase or element in the mind which is common to all human beings. In this sense, and in this sense only, is the individual soul immortal, not in the sense of personal immortality; the universal spirit alone is immortal. The universal mind itself Averroës conceives as one of the many emanations of God; it is an emanation of the spirit or mover of the sublunar sphere.

With all of the Arabian philosophers of his school, Averroës holds that the common man cannot grasp the whole truth, that in religion it is given to him in symbols which the philosopher interprets allegorically, but which the common man takes literally. Hence, a thing may be true in philosophy that is not true in theology, and vice versa. Thus, Averroës affirms that he necessarily infers the unity of intelligence by reason, but firmly holds to the opposite view by faith.—Averroës was accused in his old age of teaching doctrines harmful to Mohammedanism and banished from the court of the Calif of Cordova, whose physician he was.

It is not hard to understand why the Christian Church received with distrust the philosophical gifts of the Arabians. She had pantheistic heresies of her own to contend with, and had no desire to open the doors to the heresies of the infidels.

The different tendencies of Arabian thought which have been described above, greatly influenced, and are reflected in, the Jewish philosophy of the Middle Ages. Avicebron (Solomon ibn Gebirol), who lived in Spain during the eleventh century, offered a compendium of Neoplatonism in his book called *Fons vitæ,* which became widely known among the schoolmen of Europe. The greatest Jewish philosopher of the period was Moses Maimonides of Cordova (Mose ben Maimun, 1135-1204), a follower of Aristotelianism and the author of *Guide for the Errant* (*Moreh Nebûchîm*). He accepts the authority of Aristotle for the sublunar sphere, but turns to Jewish revelation for knowledge of the divine, upholding the doctrine of creation out of nothing and the notion of an all-wise Providence in human affairs. He also teaches the freedom of the will and the immortality of the soul (that is, of the acquired active intellect: *νοῦς ἐπίκτητος*).

Jewish Philosophy

29. Predominance of Aristotle

Although the study of the Aristotelian philosophy gave scholasticism a new lease on life, it did not at once produce any great change in the philosophical conceptions of the times. Indeed, it was because Aristotle could be used to strengthen the prevailing scholastic system that he was so readily accepted. The chief aim of the schoolman had always been to harmonize religion and philosophy; here now was a complete system of thought, the most developed product of Greek wisdom, ready at hand to form one of the partners of the union. It embraced all the branches of human knowledge, it reached definite conclusions, it presented them in clear and precise language, it had a fixed terminology; it impressed the schoolmen, as it impresses every one, as the work of calm impersonal reason. It satisfied the scholastic bent for dialectics, giving reasons for and against every important thesis; it was the work of the master of logic.

Scholasticism and Aristotle

And there was much in the content of the teachings themselves that fitted in with the demands of the School; and where agreement seemed to end, the scholastic mind had no difficulty in compelling harmony by convenient interpretations or by modifying doctrines to meet the church view. Aristotle taught the existence of a purely spiritual God, distinct from the universe and transcending it, yet the first and final cause of it: a theistic and dualistic conception which corroborated the Christian view. He offered a thoroughgoing teleological theory of

nature, one that always appeals to common-sense and one that was particularly attractive to an age beginning to take an interest in the study of nature. Here, then, seemed to be a system that organized the field of human knowledge as completely as the dogmatic system aimed to organize the field of revealed knowledge. It is not surprising that the " prince of those who know " soon became the greatest authority in " natural things," and that scholasticism now undertook to use him as a support for the Christian world-view.

There were, it is true, serious points of difference between the Aristotelian system and the Christian philosophy, differences which made themselves felt in the course of the history of scholasticism. Aristotle taught the eternity of the universe, the Church creation out of nothing; he did not teach personal immortality, the Church did; his ethics was naturalistic, the Church's supernaturalistic. But where differences and difficulties showed themselves, the schoolmen harmonized, reconciled, modified, and supplemented to suit their needs, with brilliant results, as we shall see.

The traditional theological movement of the twelfth century, however, did not come to an end with the advent of Aristotle. The church dogma had developed under the influence of Platonic conceptions, and the Augustinian theology, which represented the first great synthesis of orthodox thought and Greek philosophy, continued to exercise an important influence. The function of the School, at the beginning of the thirteenth century, was to assimilate the new material as best it could, to transform it in accordance with its own constitution,—only to be itself gradually transformed in the process. Some of the Christian teachers, however, are very little affected by the new philosophy, remaining true, in the main, to twelfth-century traditions. Among these are Alexander of Hales (+ 1245) and Henry of Ghent (+ 1293). Others, like Albert the Great and Thomas of Aquin, seek a synthesis of the traditional theology with Peripatetic thought; still others, like Siger of Brabant (+ 1282), aim at a pure Aristotelianism, as they understand it. The line of progress for the immediate future lies in the direction of the union of Peripatetic philosophy with the past achievements of scholasticism.

Augustinian Theology

Alexander of Hales (+1245), an English Franciscan monk, was the first to make use of the new teachings in a book of Sentences (*Summa universæ theologiæ*) in order to prove the dogmas. Questions are asked and answered, and the answers demonstrated, syllogistically, by references to authorities. As authorities in matters of faith he regards the Latin Fathers, Ambrose, Augustine, Jerome; also the Venerable Bede, Alcuin, Anselm, the Victorines, Peter the Lombard, Bernard of Clairvaux; as authorities of reason, Plato, Aristotle, Alfarabi, Avicenna, Algazel, Cicero, Macrobius, Boethius, and Cassiodorus. In his theology, metaphysics, and psychology, Alexander betrays his Augustinian leanings, as well as his failure to penetrate very deeply into the thought of the new movement.

Albert

Albert of Bollstädt was born in Lauingen, Wurtemberg, 1193, studied philosophy, mathematics, medicine, and theology at the universities of Padua and Bologna, and entered the order of the Dominicans (1222). He won great fame as a teacher of philosophy at Paris and Cologne, and became known as Albert the Great. He died 1280. Albert wrote commentaries on Aristotelian writings, the Scriptures, and *Sentences;* philosophical works and theological works: *De causis et processu universitatis; De unitate intellectus contra Averroem; Summa theologiæ; Paradisus animæ.*

Works in 36 vols. J. Sighart, *Albertus Magnus,* transl. by Dixon; v. Hertling, *Albertus Magnus;* Feiler, *Die Moral des Albertus Magnus.*

Albert was the first doctor of the Church to offer a scholastic system based on Aristotle's philosophy. Arabian influences, however, are clearly discernible in his work. In discussing problems having a theological bearing, he also follows the *Guide for the Errant (Moreh Nebuchim)* of Moses Maimonides, which seems to be more in harmony with the orthodox position than his other authorities. He showed a keen interest in natural-scientific studies, and has often been called the precursor of Roger Bacon in this field. In spite, however, of his insistence on experience in the study of nature, he relapses into the common scholastic habit of looking at it through the eyes of Aristotle. Albert is noted for the breadth rather than for the depth of his learning, being inferior to his great pupil, Thomas of Aquin, in critical acumen and speculative grasp.

Philosophical subjects, Albert says, should be treated philosophically, and theological subjects theologically. This tendency

to separate the two fields, which foreshadows the doctrine of two-fold truth, is the result of a growing conviction on the part of many schoolmen that certain dogmas, like the doctrines of the Trinity and the Incarnation, cannot be demonstrated logically. The principle that nothing can come from nothing, for example, is true in physics, but not in theology; it is true of particular or secondary causes, but not true of ultimates. Augustine is his chief authority in matters of faith and Aristotle in natural science and rational theology, although he admits that the Greek thinker is not always in agreement with dogmatic theology.

Albert's thought was developed and perfected, in a masterly manner, by his pupil Thomas, whose comprehensive system will serve as the best example of thirteenth-century scholasticism.

30. Thomas Aquinas

Thomas, the son of Count Landolfo, of Aquino, was born 1225 or 1227 at the ancestral castle near Naples, and was taught by Benedictine monks in the monastery of Monte Cassino. At an early age he joined the order of the Dominicans, against the protests of his father, and continued his studies at Paris and Cologne, where he became a pupil of Albert the Great. After the completion of his academic apprenticeship, he taught theology and philosophy at Cologne, Paris, Bologna, Rome, and Naples, changing his residence frequently, and devoted himself to the construction of the greatest Catholic system of thought that has ever been offered. He died in 1274. He was called by his contemporaries the angelic doctor (*doctor angelicus*) and was canonized by Pope John XXII in 1323.

Thomas wrote commentaries on many works, among them Aristotle's, and many philosophical and theological monographs. His chief works are: *Summa theologiæ; Summa contra Gentiles; De regimine principum* (his only in part).

Edition of works published by Pope Leo XIII; transl. of *Summa theologiæ* by Rickaby, Ashley. Vaughan, *St. Thomas of Aquin;* Sertillanges, *St. Th. d'Aquin,* 2 vols.; Werner, *T. von Aquino,* 3 vols.; Jourdain, *La philosophie de T. d'Aquino;* books by C. Schneider; Schütz, *Thomas-Lexikon.*

The system of Thomas is typical of the movement we have been describing. Its fundamental aim is to demonstrate the rationality of the universe as a revelation of God.

Philosophy and Theology

In its general outlines it agrees with the Augustinian metaphysics, accepting as guiding principles the teachings which had become the heritage of the Church. But it adopts Aristotle's method and operates throughout with

Aristotelian conceptions: we hear again of *actus purus,* form and matter, actuality and potentiality, the four kinds of causation, and other Peripatetic principles of explanation. Withal, no attempt is made to weaken the validity of the church dogmas or the ecclesiastical means of salvation; the naturalism of Aristotle in no wise interferes with the supernaturalism of the Christian scheme of thought, so that no complaint can be made against the strict orthodoxy of St. Thomas.

Philosophy, according to Thomas, passes from facts to God, theology from God to facts. He follows Albert in his distinction between reason and faith: dogmas like the Trinity, the Incarnation, original sin, the creation of the world in time, the sacraments, cannot be demonstrated by natural reason; they are not objects of philosophy, but matters of faith, revealed truths, —beyond reason, but not contrary to reason. We cannot prove them nor can we disprove them, but we can disprove objections to them. No necessary proof can be offered, for example, that the world was created in time; that is a matter of revelation, otherwise we should not know it; but there is nothing unreasonable in the doctrine. Only in case we already believe in these articles of faith, can their reasonableness, their probability, their plausibility, be made clear. Any attempt to give a rational proof of the mysteries of religion really detracts from faith: there would be no merit in believing only what can be demonstrated to reason. Faith is a matter of will; the will commands acceptance; this compulsion Thomas explains as an inner instinct (God invites us to believe) or as coming to us from without, as the result of miracles.

The separation of revealed theology from natural or rational theology and philosophy was officially recognized by the University of Paris in a decree " that no teacher of philosophy shall consider any one of the specifically theological questions." It has since been accepted by orthodox Christianity, Catholic as well as Protestant. Thomas rendered a service to philosophy by making a distinction which eventually led to the elimination of such questions from philosophical discussions; Duns Scotus and his followers went a step farther in also withdrawing rational or natural theology from the jurisdiction of reason and turning all problems concerning God over to faith.

Thomas's attitude on this question finds its partial explanation in his method and theory of knowledge, in which he largely follows Aristotle. (Genuine knowledge is conceptual knowledge.) Concepts, however, have their basis in sense-perception: there is nothing in the intellect that was not first in sensation. The soul has different functions or faculties, the faculty of sensation, the faculty of active intellect (*intellectus agens*), and the faculty of potential intellect (*intellectus possibilis*). It is by virtue of such powers that the soul can function in different ways, the like being assimilated to the like. Through sensation it receives copies or forms of particular objects, or " sensible species." In order to be known or received by the potential intellect, which is entirely independent of the body, or hyperorganic, the sensible copy must be freed from everything material or corporeal in it. This is done by the active intellect, which fashions the sensible copy into an intelligible copy by abstracting from it such elements as conform to the nature of this intellect, for the soul can assimilate only what is conformable to its nature. The intelligible copy or " intelligible species," as Thomas calls it, is, therefore, not the copy of a particular object in space and time with all its accidental properties, but contains only the essential qualities; through it the potential intellect knows or conceives the universal notion of the thing. The mind could not know if it were not for sensation; nor could it know if it did not have the natural predisposition for forming universal notions on the occasion of sensation. Thomas points out both the sensational and conceptual phases of our knowledge in this teaching, both its particular and its universal aspect. He also emphasizes the active or spontaneous nature of our thinking and also indicates its *a priori* character: the mind is predisposed to act in certain ways; indeed, to think in universal terms. Knowledge is implicit in it; it is made explicit when the mind is aroused to action.

Theory of Knowledge

Through the action of external objects on the soul, the raw material of knowledge is received and elaborated by the higher faculties of the mind into conceptual knowledge. Genuine knowledge, or Science (*scientia*), therefore, has its basis in sense-perception, in experience, and we can know only what we ex-

perience. Consequently, it is necessary for the philosopher to make the world of experience the starting-point of his explanation, to rise from an analysis of experience to the principles, or essence, or being of things. Such a science of being is metaphysics. We abstract from the particular objects their common qualities, or think in universals. Hence, we can have Science only where universals are possible, only where there are particulars with common qualities. Since spiritual beings form each its own species, we can have no universal notions of such beings, no genuine knowledge of them.

Since Science has the universal for its object, universals must be real, otherwise there could be no truth. But universals are not real in the sense of existing apart from particular objects: they are not "subsisting" things, *i.e.,* they do not exist as entities. The universal exists in particular objects as the one in the many, as the essence of things, or their *quiddítas,* their whatness, as Thomas calls it. At the same time, Thomas, like Albert, agrees with Aristotle in conceiving ideas or forms or universals as immanent in the mind of God; they are both that and abstractions from things in the mind of man.

Metaphysics

Forms or universals are, therefore, necessary principles of explanation in metaphysics. They do not, however, taken by themselves, account for the world of natural objects; with Aristotle, Thomas introduces a second principle, matter: nature is a union of form and matter. The nature or substance of a corporeal being consists of form and matter: by substance Thomas means that through which a thing is what it is; natural objects are what they are through matter and form. With the help of these two principles, Thomas attempts not only to account for the order and purposiveness in nature, but also to explain the existence of particular objects, or the plurality and diversity of things. Some realists regarded the form as responsible for the existence of particular individual objects, as *the principle of individuation;* according to Thomas, matter is the principle of individuation. The diversity of individuals of the same species depends on differences of bodily constitution; the *materia signata* or *materia individualis,* or definite quantity of matter which a particular natural object has, together with all the

particular accidents peculiar to this particular quantum of matter, makes the particular individual object just what it is. In the case of man, it is because the soul is connected with a particular organic body that he is this particular person. Socrates is Socrates and no one else because of the particular matter peculiar to him.

Besides the forms which inhere in matter (inherent or material forms), there are forms which can exist by themselves, which do not need matter in order to be real (subsistent forms). Among such are pure spiritual beings, or angels, and human souls. Their substance or nature, that through which they are what they are, is not matter and form, but form alone: they individualize themselves, owe their individuality to themselves.

God is pure form, pure actuality. We have a knowledge of God by faith, but we can also reach a knowledge of him by reasoning, in the manner already indicated; such knowledge, however, is indirect or mediate knowledge. In all our reasoning we pass from the known to the unknown, from the effect to the cause, from the conditioned to the unconditioned. We infer the existence of God from his creation, we can prove it only by the *a posteriori* method. Thomas rejects the ontological argument of Anselm and makes use of a number of proofs already employed by Aristotle, Augustine, and the Arabian philosophers. (a) Everything that is moved requires something to move it, every effect implies a cause: there must, therefore, be a first unmoved principle of motion, otherwise we should be compelled to go on *ad infinitum* in the causal series, and never reach the end. There must be something that exists *per se,* by itself, that does not need anything else through which it exists. (Aristotle.) (b) Natural objects are merely contingent, or possible; it is not necessary that this or that particular object exist; there must, however, be something that is not merely possible, but real, or necessary, something that forms the ground or basis of the contingent or possible, something that is absolutely necessary. (Alfarabi.) These two arguments constitute what Kant later called the cosmological argument. (c) Things form a graduated scale of excellence; there must be a highest form or degree of perfection to complete this series of more and less perfect objects.

Theology

And since everything is caused by the first cause, the first cause must be the most perfect cause, the most perfect being, the cause of all perfect things in the universe. (Augustine.) (d) Everything in nature realizes an end or purpose. Such action implies an intelligence to guide it; a purposeful universe implies a great purposer, an intelligent God. The last two proofs are teleological proofs; they were in common use among the Greeks and the schoolmen.

God, therefore, is the first and final (purposive) cause of the universe. He is pure actuality or energy; if he were mere potential being, something else would be required to make him actual or real, and he would not be the first cause. As pure actuality, God is absolutely simple and absolutely perfect; he is also absolute intelligence: absolute consciousness and absolute will.

God created the world, matter included, out of nothing. For, if God is the first cause of all things, he must be the cause of both matter and form. And since he is pure spirit unmixed with matter, matter could not have emanated from him; he must have created it out of nothing. It cannot, however, be demonstrated that the world had a beginning in time, any more than it can be demonstrated that it had no beginning; both views are possible. Creation from nothing simply means that the world owes its existence to God, that God is its necessary cause; it does not imply either temporal or eternal creation. We are, therefore, dependent on revelation for the belief that the universe had a beginning in time. Time began with the creation of the world. God not only created the world, but is responsible for its existence at every moment of time: his creation is a continuous creation. He has chosen this world as the best of all possible worlds. He can will only the best, since his will is determined by the good. His purpose in creation is to reveal himself in all possible ways, hence he creates all possible grades of being.

God created nature, human souls, and angels. Angels are pure immaterial spirits, there being as many species of angels as there are individual angels. Natural objects are corporeal, in them form inheres in matter; there are plant souls and animal souls, but they have no existence apart

Psychology

from matter. Man is both pure spirit and matter; he is one person, two principles of being in one complete substance. The soul, however, is an immaterial "subsistent" form, the entelechy of the body. It is intelligent, sensitive, and organic: the formative or vital principle of the body, the moving principle, the sensitive principle, and the intellectual principle. It is one soul possessing different capacities or functions. The embryo has the organic and sensitive soul; the intellectual soul is added at birth,—God creates the soul as soon as the body is predisposed or ready to receive it. Intelligence and will constitute the essence of the human soul and differentiate it from other souls. Although it is intimately united with an organic body, its intellectual aspect is hyperorganic, wholly free from the body. In other words, the human being is a union of mind and body; the two are intimately connected, but evidently not so inextricably bound together as form and matter in nature in general. The soul is an intelligent, sensitive, and vital principle, a trinity which forms and moves the body predisposed to such action, as well as feels, thinks, and wills.

The intelligent soul can, therefore, exercise its functions without a body; it is immortal: "after the dissolution of the body it can remain active." There is not one universal intelligence, as the Arabians held; if there were, man would be neither a rational nor a moral being, his thinking and willing would be the work of something distinct from him. The individual soul continues to exist after death in all its parts, as intellect, sense-soul, and organic soul,—for these constitute one single soul;—and forms a new body for itself like its old one.

The arguments for immortality used by Thomas are the old Platonic arguments which had become the common property of the Christian and Arabian world. The human soul knows universals and is, therefore, immaterial, hence separation from the body cannot destroy it; and since it is an actual form (a living principle), it cannot perish, for actuality (life) implies continued existence. Moreover, the soul's desire for immortality is another reason for its imperishableness; every natural desire must be satisfied.

Corresponding to sensible knowledge and supersensible or rational knowledge, man has sensuous desire and rational desire

or will. He is not absolutely determined in his desires and actions by sense-impressions like the brute, from without, as it were; but has the faculty of self-determination: it lies in his power to act or not to act. But in order that the will may decide, it must have before it the notion of the good. Hence, intelligence moves the will; but it does not compel or coerce the will, it moves it by placing before it its own object, that is, its purpose or end. The will, on the other hand, is " the prime mover in the kingdom of the soul " in the sense that it prompts intelligence and sensibility to action; over organic life it has no control. Intelligence and will, therefore, mutually determine one another, according to Thomas, but the intellect takes precedence over the will. The will is determined by what intelligence conceives to be the good, by a rational purpose. This, however, is not compulsion; compulsion exists where a being is inevitably determined by an external cause. Man is free because he is rational, because he is not pushed into action by an external cause without his consent, and because he can choose between the means of realizing the good or the purpose which his reason conceives.

The ethics of Thomas is a union of Aristotelian and Christian thoughts. It rests on the thought that God made everything for a purpose,—for the purpose of revealing his goodness in creation,—that the nature of everything points in the direction of this purpose, and that every creature will realize the divine idea and reveal the goodness of God by realizing its true being. The highest good, therefore, objectively considered, is God; subjectively viewed, that is, for creatures, it is their greatest possible perfection, or likeness to God. Thomas agrees with Aristotle that the supreme good for man, which he calls blessedness (*beatitudo*), consists in the realization of his true self. Irrational beings are determined by natural or sensuous impulses, implanted by God, to realize their goal; while rational beings seek to realize it consciously and voluntarily. The highest form of action is speculation or contemplation, and the highest object of speculation is God. Hence, man realizes his true self,—his perfection and the highest blessedness,—in the knowledge of God. But there are many ways of knowing God. We have a kind of natural, immediate, unre-

Ethics

flecting knowledge of God; this, however, cannot give us complete happiness because it is not perfect activity. We may attain a knowledge of him by reasoning, but not all human beings can reach it in this way, and, besides, it is not certain enough. We may know him by faith, but faith depends on will, and lacks self-evidence. The highest knowledge of God is intuitive: this is attained only in the hereafter and endures forever; it yields supreme happiness and is the supreme goal of human striving. They are most like God who know God as God knows himself.

We have here the Christian completion of the Aristotelian idea. For Aristotle the supreme good was speculative knowledge, philosophy, the pure contemplation of God. The philosopher, or wise man, after all, was his ideal. For Thomas, too, knowledge of God is the highest good, but it is gained by intuition: it is a beatific vision, possible only in the life to come. In this sense it is a supernatural good; supernatural, also, in the sense of being a supernatural gift of grace. Since blessedness is nothing but the attainment of the highest good, there can be no blessedness without happiness (*delectatio*) accompanying it. Love is another concomitant of blessedness: we cannot see God without loving him.

Thomas does not confine himself to the discussion of the *summum bonum* in his ethics, but enters upon a careful analysis of moral conduct and a full treatment of the virtues. Acts are called moral which are the result of deliberation and choice; the acts, in other words, of free, rational beings. The goodness or badness of an act depends on the object it aims at, the purpose or intention of the agent, and the circumstances. These must conform to the rule of reason, which is the principle of human conduct. The supreme criterion of moral conduct is the reason of God, the eternal or divine law (*lex æterna*), the laws of the Old and the New Testament. The law of the Old Testament has an earthly goal, demands just works, and has fear for its motive; the law of the New Testament has a heavenly goal, demands holiness of will, and its motive is love. The law of God, however, is not an arbitrary law; God cannot will anything but the good. Besides the eternal law, there is natural or human law (*lex naturæ*), the law which is written on our hearts. Hence, in order to be good, an act should conform to reason

quickened by divine law or natural law, as the result of instruction or infusion.

Conscience is explained by Thomas in the medieval fashion. The intellect is speculative and practical; reason is endowed with both practical and theoretical principles. As the faculty of moral principles, reason is called *synteresis.* The synteresis furnishes the major premise of a syllogism: All evil ought to be avoided; an inferior reason or the Bible informs us that adultery is evil; conscience (*syneidesis*) draws the conclusion that adultery ought to be avoided.

It is to be remembered that the immoral character of an external act depends exclusively on the will; an act may be good as such, but it may be turned to an immoral purpose and so be bad. An external act, however, which as such is evil can never be made good by the will directing it to a good end. That is, Thomas does not preach the doctrine that the end justifies the means. As to the so-called " passions of the soul," the appetites of sense, these are not always morally bad; they are so only when they fail to conform to the rule of reason.

Thomas follows Aristotle in his treatment and classification of the virtues, supplementing this, however, with Christian conceptions. No virtue is inborn; all virtues may be acquired by the performance of virtuous acts. Such acquired virtues lead to imperfect or incomplete happiness, which is possible in this life. In order to realize eternal blessedness, a supernatural principle of grace must be added to the soul by God, a higher form which makes possible a higher perfection and a higher being. Certain supernatural virtues are poured into man, or infused, by God: the three theological virtues, faith, hope, and charity. Without these, the supernatural goal cannot be reached. The ethical virtues, too, in order to help us in realizing the life of blessedness, must needs be implanted by God; as mere acquired virtues they are of no avail in this regard. Love is the highest of the infused virtues, the perfect form of all the virtues.

The contemplative life is, as we have seen, the highest, the most blessed, and the most enjoyable life. The state of contemplation can be reached even in this world. Through the illuminating influence of God a state of rapture may be pro-

duced, in which the soul is freed from the senses and its organs, and lost in pure action (mysticism). The contemplative life is not only superior to the practical life, but also more meritorious. It is grounded on the love of God, while the practical life is grounded on the love of man. In so far as the active life aims at outward acts, it is a hindrance to the speculative life; in so far as it is engaged in the control of the senses, it is a help to it.

The safest and quickest way to blessedness is the total abandonment of earthly goods and the seeking of eternal life. This course cannot be commanded, it can only be advised: there are certain evangelical counsels (*consilia evangelica*), poverty, celibacy, and obedience, by following which a higher perfection is attained. For Thomas as for Augustine and, indeed, for all the priests of the Church, the monastic or ascetic life is the ideal life; this, however, is only for the few; for the great mass of men, who live in the world, a lower limit is set.

The contrast between Greek and medieval ethics, to which attention has already been called, is plainly marked in the moral philosophy of Thomas Aquinas. For the Greek philosopher the highest good is always some phase or achievement of our earthly human life, be it virtue or happiness; something, moreover, that may be attained in a perfectly natural manner, through the exercise of virtue and with the aid of human reason. According to the medieval theologian, the *highest* good is not a life in the world,—this earthly existence is but a pilgrimage to God,—but eternal blessedness in the life to come. And the attainment of the goal does not follow naturally and necessarily from the performance of virtuous conduct, but depends on the supernatural grace of God himself. The ideal good man is not the wise man, but the holy man, the man who, inspired by love and respect of God, does the will of God completely. The state of holiness can be best attained in the monastery, away from the temptations and complications of the world.

Evil Thomas regards, with Augustine, as privation. In so far as a thing acts according to its nature, which is good, it cannot cause evil. Evil is due to defective action on the part of the form, or cause, or to the defective state of matter, the effect. In the case of moral evil, the defect lies in the will, which lacks

the direction of the rule of reason and of the divine law. All things aim at good, hence when they realize evil, it is outside of their intention. This is particularly true of free rational beings. Whatever they strive for, they regard as good. It may be evil; it is not because it is evil, however, that they desire it, but because they view it *sub ratione boni.*

Thomas caps his ethical system with a doctrine of salvation that follows Augustine and the orthodox theology. In the Aristotelian metaphysics, the lower stages of existence are conceived as the *matter* of the next higher stages, which are *forms* in relation to them; and so on to the end of the series. Thomas makes use of this thought in calling the natural man the matter and preparation for the spiritual man, the man in whom the grace of God operates and who, therefore, can rise to a still higher state of perfection than is possible to the Aristotelian man. Through Adam's sin man's nature was corrupted and his guilt transmitted to his descendants (original sin), and only divine grace can redeem him. The sacraments of the Church are the organs or instruments through which God bestows his grace. God endows those with grace who are to be saved. This does not abolish the freedom of the will, in Thomas's opinion, because grace can act in man only with the coöperation of his will. God is not responsible for man's failure to return to him; he foresees that certain persons will abuse their freedom and do evil; he permits it and predestines such persons for punishment. The goal of all ethical and religious progress, however, is universal resurrection, in which is included the resurrection of the body.

Politics

In his theory of the State, Thomas fuses Aristotelian conceptions with the ideals of the Christian polity already set forth in Augustine's *City of God.* Man is a political being and seeks life in society. The purpose of all government is the common weal; this is possible only in a society in which there is internal unity or peace and security against external foes, and can be best attained by a centralized government or a monarchy. The monarchy must be so constituted as to prevent tyranny; but even in case of extreme oppression, regicide and revolution are never justifiable. The remedy should be sought by legal means, in accordance with the constitution,—

for the political order is a divine order;—when that is not possible, the outcome must be left with God.

The Prince should keep in view the divine purpose and enable his subjects to realize the highest good. But since the highest good of mankind is eternal blessedness, the Church and its head, the Pope, who is God's vicegerent on earth, are superior to the secular power. In spiritual affairs, therefore, the temporal rulers are subordinate to the priests; they are vassals of the Church, and their subjects do not owe them loyalty after they have been excommunicated. The State is no longer regarded as the result of the sinful nature of man, as in Augustine's *City of God,* but is a divinely established institution.

Among the followers of Thomas we mention: Ægidius of Lessines (1278), Gottfried of Fontaines (*circa* 1283), Ægidius Colonna (+1316), Thomas of Strasburg (+1357), Hervé de Nedellec (+1323), Thomas Bradwardine (+1349), Capreolus (+1444), Dominicus of Flanders (+1500), Thomas de Vio (Cajetanus, +1534). The poet Dante (1265-1321) is an enthusiastic follower of the Thomistic teachings in his *Divina Commedia.*

A modified Thomism is taught by the Jesuit Molina, Gabriel Vasquez (+1604), and Francis Suarez (+1617). Francis Vittoria (+1546) and Bañez (+1604) advocate the original Thomistic views.

The Dominicans made Thomas "the doctor of the order" in 1286. The Jesuits adopted the Thomistic teachings at the foundation of their order by Loyola (1534), but later departed from them. Pope Leo XIII, the predecessor of the present Pope, made the philosophy of St. Thomas the official philosophy of the Catholic Church and ordered the publication of a new edition of his works. Thomism is to-day the leading philosophical system in Catholicism: the teachers and writers of the Church base themselves on Thomas.

31. Anti-scholastic Tendencies: Mysticism, Pantheism, and Natural Science

In addition to the great scholastic systems of Albert and Thomas, we find in the thirteenth century the same supplementary and antagonistic movements which we noted in our survey of twelfth-century thought: mysticism, logical and scientific studies, and pantheism continued to attract many scholars of the Church.

Mysticism

John Fidanza (1221-1274), called Bonaventura, a pupil of Alexander of Hales, belonged to the Franciscan order, in which

Augustinianism was popular. Although he wrote *Sentences* and exegetical works, he is particularly noted as a mystic. His leanings are toward the Augustinian-Platonic mode of thought, and his mysticism does not essentially differ from that of the school of St. Victor. His chief mystical work is the *Itinerarium mentis ad Deum.*

The way to God leads from *cogitatio* through *meditatio* to *contemplatio.* In contemplation we pass through several stages: we contemplate God in the corporeal world, then in our own inner life, and rise from this to the immediate vision of God himself. On the highest stage the soul transcends itself, enters upon a state of holy ignorance, and becomes one with the divine will through love. The preparation for such a state of ecstasy, which is a gift of divine grace, is a life of holiness and prayer. As the supreme form of Christian perfection, Bonaventura, who was himself a member of the mendicant order of St. Francis of Assisi, regards the ascetic life in the monastery with its vows of poverty, chastity, and obedience.

See works on Mysticism mentioned p. 177.

Logic

Among the writers who occupied themselves with the study of logic and grammar are William of Shyreswood (+1249), Lambert of Auxerre (+1250), and Petrus Hispanus (most likely identical with Pope John XXI, who died 1277). Peter wrote a text-book on logic, *Summulæ logicales,* which largely follows Aristotle and Boethius, and which for centuries remained an authoritative work on the subject. Nicolas of Paris (who taught at Clos-Bruneau, 1250-1263) combined grammar and logic in his *Syncategoremata.*

Natural Science

As has been pointed out before, a certain interest in natural science went along with the chief intellectual business of the Middle Ages, which was scholastic philosophy. During the thirteenth century the occupation with scientific studies continued, although Roger Bacon, one of the leaders in the movement, complains of the scant attention paid to such things outside of Oxford. Among those whom we have already mentioned as encouraging an interest in nature were Adelard of Bath and Albert the Great. In England the mathematical and physical sciences were cultivated. Albert, Vincent of Beauvais, and Roger Bacon devoted themselves to geographical studies. The scientific men of the times

believed that the earth was a sphere, a view which the Church condemned. It was supposed that the Mediterranean basin occupied the center of the earth, and that India could be reached by the sea route westward; indeed, Columbus died in the belief that he had discovered the western part of India.

The names which have been recorded in the list of students of science are: Alexander Neckam (+1217), Alfred Sarchel (who wrote a treatise on the motion of the heart, about 1225), John Peckham (+1292), Roger Bacon (+1294), Witelo (born about 1230), and Dietrich of Freiberg (a teacher at Paris from 1265-1269). In Witelo and Dietrich the natural-scientific interest is combined with Neoplatonic leanings.

The most original and independent figure of this group is Roger Bacon (+ 1294), a curious mixture of the medieval and modern scholar. Roger, who was a Franciscan monk and received his training at Oxford and Paris, devoted himself especially to the study of mathematics (which he regarded as the foundation of all scientific study and in which he included arithmetic, geometry, astronomy, and music) and the physical sciences, among which he enumerates perspective, judiciary and operative astronomy, alchemy, agriculture (plants and animals), medicine, astrology, and magic. He also regarded the study of languages, Greek, Hebrew, Arabic, and Chaldean, as indispensable to theology and philosophy. Metaphysics is the science of first principles. Roger recorded his thoughts in an encyclopedic work, the *Opus majus.*

Opus majus edited by Jebb, Bridges; unpublished writings by Brewer; other unpublished writings by Steele; an unpublished fragment of *Opus tertium* by Duhem; *Essays* by Watt.

Charles, *R. Bacon,* etc.; H. Siebert, *R. Bacon;* E. Flügel, *R. Bacons Stellung in der Geschichte der Philosophie;* Parrot, *R. Bacon et ses contemporains;* Werner, *Psychologie,* and *Kosmologie des R. Bacon;* Vogl, *Physik R. Bacons.*

Of the two methods of knowledge, demonstration and experience, Bacon lays stress on the latter, " for without experience, nothing can be sufficiently known." Experience, however, is twofold: human or philosophical, which depends on the external senses, and inner illumination or divine inspiration, through which we reach " knowledge not only of spiritual things, but

of corporeal matters and the sciences of philosophy." By means of such inner experience we may also rise, through seven stages, to a condition of ecstasy or mystical knowledge " of spiritual things and of all human sciences," in which he who has the experience sees much of which man is not permitted to speak.

We see how far removed this attitude of Bacon's is from the modern conception of science. With much that is modern, he offers a mass of fantastic ideas and superstitions: astrology is mixed with astronomy, magic with mechanics, alchemy with chemistry; and the doctrine of twofold experience opens the door to all kinds of possibilities harmful to the development of experimental science. The important thing, however, is that Bacon actually busied himself with nature and that he emphasized the need of observation in this field.

In his Augustinian-Platonic philosophy, Roger followed the teaching which was becoming a tradition of his order, combining with it Arabian speculations.

Heresy

In addition to its mystical and natural-scientific tendencies, which did not always accommodate themselves to scholasticism, the thirteenth century exhibits signs of opposition to the entire church philosophy. Under the influence of Averroism, a number of thinkers distinguish between philosophical truth and theological truth, holding that though these may contradict one another, each is true in its own sphere. Some of the heretical propositions developed in this way were condemned in 1240 by the Bishop of Paris. John of Brescia advanced a number of heresies in 1247 and made the plea that they were offered not as theological but as philosophical truths. Again, in 1270 and in 1277, the Bishop of Paris (Étienne Tempier) rejected the doctrine of twofold truth and condemned a long list of theses taught in the Faculty of Arts in the University of Paris, among them propositions denying the Trinity, the resurrection of the body, the suffering of the soul by fire, the supernatural nature of ecstasies and visions, creation in time, and the need of grace as means to happiness. Around the same time Siger of Brabant tried to show the impossibility of demonstrating a number of propositions, which were " theologically " self-evident, by proving their opposites: for example, that there is no God, no cer-

tain knowledge, no moral responsibility, no principle of contradiction, and that a heavy object not supported will not fall.

The example of Raymond Lully (1235-1315; *Ars brevis, Ars magna*), who opposed such heresies, shows that faith in the capacity of reason to solve all problems had not disappeared. In his opinion, reason not only reaches no conclusions contradicting the Christian faith, but is able to demonstrate with absolute certainty all the mysteries of religion. He invented what he called " the great art," a method by means of which one might " without the effort of learning and reflection give information concerning all questions of knowledge." The method consisted in placing a series of nine concepts and questions on seven movable concentric disks and manipulating the disks in such a way as to produce answers. With this barren mechanical device he succeeded in winning a large and enthusiastic following, which continued to believe in the " great art " down to the seventeenth century. (Cf. Kercher, *Raimund Lullus.*)

Raymond Lully

DECLINE OF SCHOLASTICISM

32. John Duns Scotus

Although the Thomistic philosophy became the official doctrine of the great Dominican order and gained many adherents, its supremacy did not remain undisputed. The Franciscan schools, whose first great teachers, Alexander of Hales and Bonaventura, although not repudiating Aristotelianism, followed their Augustinian-Platonic traditions, opposed many of the arguments and conclusions of the new system, and soon Christian scholars were divided into two rival camps. The Franciscans emphasized the practical, emotional, mystical, personal, and devotional side of religion; for them the intellect was of less importance than the will, the ethical-religious content of Christianity more significant than theoretical constructions of the faith. It was natural that many critics and opponents of the new scholasticism should have sprung from this order. There were a number of possible

Opposition to Thomas

directions for dissenters to take: first, to attack certain principles of the dominant philosophy; second, to reject the union of Christianity with Aristotelianism as unsuccessful; third, to deny the demonstrableness of the faith; fourth, to deny the possibility of scholasticism altogether. By adopting the first three of these positions, John Duns Scotus paved the way for the acceptance of the fourth and thus assisted in the overthrow of the scholastic system.

Among those who joined the opposition to Thomism, we name the following, some of whom have already been mentioned in other connections: Peckham, Warro, Kilwardby (+1278), William Lamarre (who wrote *Correctorium fratris Thomæ*, 1284), Richard of Middletown (+1300), Henry of Ghent (1217-1293), Siger of Brabant (+1282), Matthew of Aquasparta (+1302), Peter John Olivi (+1298), Roger Bacon (+1294), William Durand of St. Pourçain (+1332).

Duns Scotus

The spirit of opposition to the Thomistic system found expression in the thought of John Duns Scotus (born *c.* 1265), a native of England or Ireland and a member of the Franciscan order. The exact place and date of his birth are not known. He studied at Oxford, showing an aptitude for mathematics, and became a teacher at Oxford, Paris, and Cologne, where he died in 1308. His fame rests not so much on his constructive ability as on his dialectical acumen and skill as a critic, his title, "the subtle doctor," being well earned. He was influenced by Roger Bacon and Alexander of Hales, and regarded Augustine and Anselm as the highest authorities. The Franciscans made him the doctor of their order.

Among his works are: *Opus Oxoniense* and *Opus Parisiense* (lecture-notes published by his pupils at Paris); *Quæstiones quodlibetales.* Ed. of works, Lyons, 1639; Paris, 26 vols., 1895.

Hagenbach, *History of Doctrines,* transl.; Werner, *J. Duns Scotus;* Seeberg, *Die Theologie des Duns Scotus;* Kahl, *Die Lehre vom Primat des Willens bei Augustinus, Duns Scotus und Descartes.*

Faith and Knowledge

The thinking of Duns Scotus is based on the following presuppositions: The dogmas are beyond dispute; faith is the basis of the highest truth; love is the fundamental virtue; faith and love are based on the will; they are the conditions of the vision of God; hence, the will is superior to the intellect. He agrees with Thomas that there can be no conflict between the truths of faith and the truths of reason; and he, too, makes use of philosophical knowledge in support of his own theories and in criticism of those of his opponents. In his opinion, also, reason is incapable of ex-

plaining the mysteries of religion and should be supplemented by faith. But Duns Scotus goes farther than Aquinas in narrowing the sphere of reason; his mathematical studies had taught him what real demonstration meant, and he did not consider propositions pertaining to divine nature, divine purpose, divine prescience and predestination, the immortality of the soul, and the like, susceptible of rational demonstration or the arguments for them valid. Here, he held, faith alone can give us certainty; it does not entirely exclude doubt, but it does exclude convincing doubts. The aim of theology is not to reveal the plan of salvation; its aim is practical, not theoretical. Without a revealed doctrine, with which theology concerns itself, we could not know the purpose of God with respect to man; no science can tell us that. Theology has its own principles and the highest object (God); hence, it takes precedence over all the sciences. Philosophy, too, has its own principles and is an independent science; it is, in no way, subordinate to theology. In this teaching a clean separation is made between revealed theology and philosophy, which, consistently adhered to, leads to the emancipation of philosophy from its servitude to theology. Duns Scotus made the separation in the interest of faith, but in doing so he opened the way for the liberation of philosophy. He was so thoroughly convinced of the truth of revealed theology that he feared no danger from thought; reason, if properly employed, was bound, in his opinion, to be in harmony with religion; although it could not demonstrate the dogmas, it could, at least, not disprove them. For thinkers less firm of faith than Scotus, there were other possibilities: reason might reach results conflicting with the dogma, in which case they could either accept or pretend to accept both reason and faith or abandon the dogma. Every one of these alternatives was chosen.

In his doctrine of universals Duns Scotus largely follows the theory of his time, which Thomas, too, had accepted. Universals exist *before* things, as forms in the mind of God; *in* things, as their essence or general nature; and *after* things, as abstract concepts in our minds. Universals are not mere ideas; conceptual knowledge is real or has a real object; otherwise all science would be reduced to

Doctrine of Universals

mere logic. The principle that governs our philosopher is that thought and reality agree, that logical notions and distinctions are not mere acts of thought, but have a reality corresponding to them; it is not necessary, however, that the correspondence between knowledge and objects be one of identity, that the one should be the copy of the other. We could not think at all if we did not begin with particular objects; yet, starting as we do, we think in universal terms. And we distinguish logically between the genus and the species; the genus necessarily implies the species and a species necessarily implies individuals. Every individual differs from other individuals of the same species; there is an individual difference differentiating individuals from one another, as there is a specific difference differentiating species. We can go no further, we cannot divide the individual: every individual or particular thing is an indivisible unity, it is the ultimate reality, the last form to which no other can be added. The individual difference is what constitutes this particular individual; just as the species is the genus plus the *specific* difference, so the individual is the species plus the *individual* difference. The universal nature or essence or *whatness (quidditas)* is here supplemented by the individual nature, by *thisness (hœcceitas,* as later followers expressed it). Just as *man* proceeds (logically) from animal by the addition of the specific difference, *humanity,* to life, so Socrates comes from *man* by the addition to the universal and specific essence, of the individual character (*Socratitas*). This individual difference, Duns Scotus declares, is the *principle of individuation,* and not matter, as Thomas had taught. The particular thing is what it is, not because of the matter in it,—if that were so, the members of the same species would all be the same,—it is what it is because of its individualized nature, its individuality. This difference is not a thing (*res*), nor is it merely a logical distinction. It is not a separate entity added to the general characteristics of objects, but a quality or form or character going with these general characteristics,—inherent or immanent in them.

By analyzing universals or general concepts we finally reach individuals; but we can also pass upward until we come to the most universal concepts, the highest of which is being (*ens*),

which transcends all others, for we can predicate it of everything else. Besides this, there are other transcendent concepts; they are the most general predicates which we can apply to things: unity, goodness, truth; identity and diversity; contingency and necessity; actuality and potentiality, etc.

With Thomas, Duns Scotus holds that we can infer the existence of God only from his works or *a posteriori*,—the proof is potential in every created spirit, one that every reason can make actual,—but that divine omnipotence or creation out of nothing cannot be proved. God is pure form or energy or actuality; everything in him is explicit, nothing merely potential, otherwise he would not be perfect and absolutely spiritual. In God knowledge is a living intuition of everything real and possible, an explicit actuality. From the fact of the world we infer a first cause to which it is a necessity of thought to ascribe conscious knowledge and purpose. We cannot, however, deduce *a priori* God's intelligence from his divine nature or being. Only such arguments as are based on *a posteriori* reasoning have rational certainty; all other forms of speculation followed by the schoolmen of his day Duns rejects. For the same reasons we can ascribe will to God; he wills himself absolutely, his will is infinite: in a single act he can will everything possible to him, and he is absolutely free to will or not to will. This is inconceivable to human reason, but it is a Christian conception. God willed the world and must have willed it eternally, otherwise there would have been a time in which he did not will it, which would imply change and imperfection in God.

Theology

Everything else in creation is a union of form and matter, actuality and potentiality; all created spirits, the angels included, and the human soul, have matter as well as form. (This doctrine was one of the points of dispute between the Scotists and the Thomists.) What Scotus means is that potentiality implies materiality of some sort, that only the actual or realized spirit (God) is pure. We can conceive of matter (*materia prima*) as the nature common to all things.

The psychology of Duns Scotus, like the rest of his philosophy, shows many points of agreement with Thomas's. Form and matter, soul and body, however, constitute a substantial unity

in man. But the soul itself, as we have just stated, is a union of form and matter; and the body, too, as the particular body of a particular soul, has its form. Duns also holds that the different powers of the soul are distinguished from the essence of the soul and from one another *formally,* not really: there is one soul with different powers, or functions as we should say. Another difference became the ground of controversy between Thomists and Scotists. Although Thomas recognizes the importance of the will in the economy of the soul, the intellect takes precedence in his system over the will; as the most abstract and simple function, it is the higher faculty, the distinguishing mark of the rational being; it determines the will with respect to the highest good, as we have seen. With Duns Scotus the will is superior to the intellect. The will would cease to be will if it were necessarily determined by knowledge. It has power of assent (*velle*) and denial (*nolle*). Imagination and intelligence are the inevitable preconditions (*causæ sine quibus non*) of acts of will, but not the determining causes: the will can decide in favor of temptations of sense or in favor of the moral law, the principles of morality (*synteresis*); it is a free will (*liberum arbitrium*).

Psychology

If this is so, then the will can, without the aid of divine grace, act in accordance with the demands of natural morality. Duns accepts this conclusion, but points out that eternal life cannot be won without faith, hope, and love, which are gifts of grace, and which enable the will to perform the acts demanded by God. For Thomas eternal blessedness consists in the contemplation of God; for Scotus it is centered in an act of will, in that function in which we are directly united with God, and that is love, which is an act of will. The vision of God is the material cause, or condition, of blessedness. The purpose of knowledge is will; will or love is an end in itself. Thomas says, if we had our choice between intellect without will and will without intellect, we should choose the former; Scotus says we should choose the latter. The will is the higher, nobler, more worthy faculty of the soul, it is absolutely free in its action and not determined by the idea of the good; it chooses the good freely.

Duns Scotus applies these thoughts to his notion of God. In

God, too, the will is superior to the intellect, he is not determined by his reason. Hence, we cannot know his purposes and understand his acts by rational deductions from principles. It was not necessary for him to create a world, and he could have created a different one from this if he had so willed. Nor is he bound by the order he has established; he can change it, *at will,* without incurring guilt. Whatever he wills and establishes is right (*lex recta*). The universe, therefore, is not rational in the sense of being the necessary outcome of rational thought; if it were, we could reason the whole thing out ourselves, think the thoughts of God after him, as it were.

God and the Moral Law

Similarly, the divine commandments which concern our life in the world and our relations with one another are not necessary commandments: God does not command us to act in certain ways because the rules are self-evident to reason or necessary; no, they are necessary because God prescribes them. He could have made a society in which murder and polygamy and the violation of property rights would not be wrong. We cannot deduce these laws from an absolute moral law, we cannot derive them from the command of brotherly love, because they do not follow necessarily from it, and, besides, the law of love is not a law of nature; nor can we prove that the love of God is a law of nature. Duns does, however, regard certain laws of the Decalogue, the first four commandments, as necessary. In principle, this, of course, amounts to an abandonment of the entire theory of the arbitrary will, for if God is bound by necessary laws in any case, he is not absolutely free. Scotus justifies the exception in this way: That man should have no other gods but God, that he should not take his name in vain, that he should worship him, are self-evident laws; they follow from God's love of himself, and God must love himself; they are not merely the commands of an arbitrary will.

Since God is omnipotent, his decrees must be fulfilled. Among his irrevocable decrees are the reward of the good and the punishment of the wicked. But who in particular is to be rewarded, who punished, is not settled. Here we are dealing with particular decisions, not general laws, and, in these cases, God may change his mind, will otherwise, since he is absolutely free. The

divine will is absolutely just because what it wills is absolutely just.

Among the pupils of Duns Scotus are John de Bassolis, Antonius Andreæ (+1320), Francis de Mayronis (+1325), and Walter Burleigh (+1337).

33. Nominalism

Thomas and Scotus both limited the sphere of provable truth. Doctrines which had been regarded as demonstrable by schoolmen before them, were relegated to the domain of authority and faith. Scotus went even farther than Thomas in this direction, as we have seen; he not only circumscribed the boundaries of philosophy, but subjected the arguments which had been offered in support of Christian dogma and natural theology to a searching and destructive criticism. We find him exercising a strict censorship over the intellectual activities of the schoolmen, distinguishing carefully between what is valid and what is invalid in their reasonings, and keeping thought within what appeared to him its legitimate bounds. He does not lack confidence in human reason; indeed, he has an abiding faith in it and employs the methods of logic in theology as well as in philosophy. But he clearly understands that the articles of faith, though capable of rational treatment when once we are in possession of them (through revelation), cannot be acquired and demonstrated by the unaided natural reason.

Rational Theology and Universals

This view suggested to some thinkers a further and more radical advance: they simply wiped the field of provable theological truth from the scholastic map. Nothing in theology can be demonstrated, they held; theology is not a science at all, the dogmas are not only incapable of proof, they cannot even be rendered intelligible. Instead of endeavoring to rationalize them, we should obediently believe them; though there may be neither rhyme nor reason in them, they are true nevertheless; it is meritorious to believe what cannot be demonstrated.

Another line of thought was suggested by the realistic teachings of Thomas and Scotus. If the particular object is, as Scotus says, the "ultimate reality," if individuality consists

not merely of accidental characteristics, but is the final realization of the universal, then the particular object is the true and the most real reality and, for us, the only object of scientific study. And such a study reveals the fact, so it was argued, that general concepts or universals are not real in the scholastic sense at all, but mere abstractions of the thinking mind, mere ways of expressing qualities which are common to many particular things. Here we have the revival of a doctrine which appeared at the threshold of scholasticism (Roscelin), and which also marks its end: nominalism.

Among those who drew these conclusions and laid the foundations for a new nominalistic philosophy are the Franciscan Peter Aureoli (+1321) and the Dominican William Durand (+1332), once a follower of Thomas. The great leader of the movement, however, called by his followers the "venerable inceptor" and "invincible doctor," was the English Franciscan, William of Occam, or Ockam (born about 1280). He was probably a pupil of Duns Scotus at Oxford, and it is certain that he taught at Paris for a few years. In the conflict which was raging in his day between Church and State, he sided with the nationalists and enjoyed the protection of Louis of Bavaria, at whose court he died in 1347.

Among his books are four books of *Sentences; Summa totius logices; Quodlibeta septem; Centiloquium theologicum;* and works on the Power of the State and the Church.

Löwe, *Der Kampf zwischen dem Realismus und Nominalismus,* etc.; Schreiber, *Die politischen und religiösen Doktrinen unter Ludwig dem Baier.*

William of Occam

According to William of Occam, only particulars exist and all our knowledge begins with particulars. Hence follows the importance of what he calls *intuition,* or perception, through which we become aware of the existence of a thing and which we express in judgment (*actus intellectus*). We abstract from the particular objects the qualities common to them, and so form concepts or universals. We have no special faculty of the mind, or intellect, for this; we naturally abstract when two similar objects are presented to us. Such universals, however, exist merely as ideas or thoughts in the mind, and are expressed in words or conventional signs: they signify many particular similar things. Science, therefore, is wholly concerned with signs or *termini* (the term = the word plus its meaning). This does not mean, how-

ever, that our judgments are concerned with ideas only; they are always concerned with things.

Universals, consequently, have no existence outside the mind, they do not exist *in* things; to assume it, as the realists do, is to make entities of abstractions, or to hypostatize ideas, and will, besides, involve us in all kinds of absurdities. *Entia non multiplicanda præter necessitatem* ("Occam's Razor"): entities or principles should not be unnecessarily multiplied, William says,—a thought already expressed by Peter Aureoli. Nor do universals exist, in the mind of God, as substances or entities; they are the knowledge which he has of things; like ourselves, he has knowledge of particular things, which alone have real existence.

Intuitive knowledge includes, besides sense-perception, a knowledge of our own inner states,—"intellections, acts of will, joy, sorrow,"—which is more certain than sense-perception. We do not, however, gain a knowledge of the nature of the soul in this way, but merely observe its activities. In addition to such direct knowledge we have, also, what Occam calls "abstractive" knowledge, by which he means the knowledge we acquire by deductive reasoning or the syllogism, and which is necessarily true. The principles forming the basis of our arguments, however, are derived from experience by induction. Experience, then, is the source of our knowledge, and all knowledge that transcends experience is a mere matter of faith. It is impossible to demonstrate the existence of God either ontologically (Anselm) or from experience. Even the latter method does not yield more than probability, as all the principles which it employs, such as the notion of the impossibility of an infinite regressus, are unproved assumptions. Still, the existence of God is probable on rational grounds, whereas the articles of faith cannot be rendered intelligible to reason. It is impossible to rationalize the Christian dogmas; all we can do is to believe them. Hence, there is no such thing as a science of theology; we are wholly dependent on revelation for the certainty of the truths of religion. Philosophy and theology do not play into each other's hands.

God is an omnipotent being, bound by no law, free in thought, will, and action. He could have established other rules of mo-

rality than those which have been prescribed: there is nothing self-evident about them, they are binding on us only because he has willed them. In us, as in him, the will is superior to the intellect.

We find in these views the abandonment of the fundamental principles from which scholasticism had started out. The goal had been the rationalization of the Christian faith, the union of philosophy and theology. It is now declared that the undertaking is not only presumptuous, but futile, that scholastic theology is a pseudo-science, that the entire contents of faith are inaccessible to reason. The pious Franciscan who promulgated these thoughts, and those who accepted his teachings as a whole, held all the more obstinately to their faith in the wreck of theology, but men of different temperament refused to give up the attempt to rationalize their universe. The battle between the Thomists and Scotists was now transformed into one between realists and nominalists, and was carried on with extreme bitterness. The University of Paris prohibited the use of William of Occam's books in 1339, and rejected nominalism in 1340; more than a century later (1473), all the teachers at the University were bound by oath to teach realism. Other universities, however, were established, in which the nominalists found ample opportunity to express their opinions: Prague in 1348, Vienna in 1365, Heidelberg in 1386, Cologne in 1388; and the controversy lasted over a hundred years.

Nominalism versus Realism

Among the followers of Occam are: John Buridan (died *c.* 1350), who discussed the freedom of the will; Albert of Saxony (+1340), who wrote on logic and physics; Robert Holcot (+1349); Gregory of Rimini (+1358); Nicolas d'Oresme (+1382); Marsilius of Inghen (+1392); Heinrich Hembucht (+1397); and Gabriel Biel (+1495), who gave a systematic exposition of William's teachings and is called the "last of the schoolmen."

Pierre d'Ailly (+1425) regarded inner perception as more certain than sense-perception and recognized the scientific certainty of deductive reasoning, based on the principle of contradiction, such reasoning as is employed in mathematics. Robert Holcot insisted on the consistent development of philosophical thought, regardless of its consequences for the dogma. Nicolas of Autrecourt criticised the notion of causality and, opposing Aristotle, accepted the atomistic theory and the doctrine of the eternal recurrence of worlds. John Gerson (1363-1429) based his mysticism on nominalistic premises, and em-

phasized the importance of revelation, penitence, and faith as means of knowledge. Raymond of Sabunde attempted to reconcile nature and revelation, or to prove the doctrines of Christianity by reference to the divine revelation in nature.

34. Mysticism

We have frequently shown, in considering the different tendencies characteristic of the Middle Ages, how mysticism accompanied scholasticism as a shadow. Many minds refused to be satisfied with a science of God that brought them no nearer to God; a theology meant nothing to them that could not give them personal experiences in which they might come into communion with divine being. The current of theological thought in the fourteenth century was altogether favorable to this religious movement: the more impotent reason became to grasp and explain the mysteries of religion, the greater emphasis could be laid on feeling and will.

Orthodox and Heretical Mystics

During the fourteenth century we find two branches of mysticism, a Latin mysticism, which is submissive to the Church and follows the path marked out by the Victorines and Bonaventura; and Germanic mysticism, which assumes a more independent attitude toward the doctrines and government of the Church. To the former branch belong Pierre d'Ailly (1350-1425), his pupil John Gerson (1363-1429), and Raymond of Sabunde, who wrote *Theologia naturalis sive liber creaturarum* (*c.* 1434). The Germanic school includes Eckhart or Eckehart (1260-1327); Heinrich Seuse or Suso (1300-1366); Johannes Tauler (1300-1361); the anonymous author of the *German Theology;* and the Dutch mystics: Jan van Ruysbroek (1293-1381); Gerhard de Groot (+ 1384); the Brothers of the Common Life; and Thomas à Kempis (Thomas Hamerken of Kempen, 1380-1471), the celebrated author of the *Imitation of Christ.*

See the works on the Mystics and Mysticism mentioned on p. 177; also Pfeiffer, *Deutsche Mystiker des XIV. Jahrhunderts* (contains the works of Eckhart and his predecessors). Eckhart's writings and sermons, edited by Büttner. See A. Lasson, *Meister Eckhart;* also Lasson's excellent account of Eckhart in Ueberweg-Heinze, *op. cit.*, § 38. For bibliography on German Mystics see Ueberweg-Heinze, *ib.*

The greatest figure in the whole movement is Meister Eckhart, who was a Dominican teacher and died in the prison of his order. Although the Thomistic system forms the metaphysical groundwork of his mysticism, Neoplatonic elements, which had their source in the writings of the pseudo-Dionysius, are strongly marked. In his Latin writings Eckhart presents his views in more technical form and in connection with scholastic tradition, while in his German sermons and tracts he gives a more personal, emotional, and popular treatment. It was through the latter, in which the ethical and psychological teachings are strongly emphasized, that he exercised his great influence; his significance appears, as Lasson has said, when he is appealing to the congregation and not to the School. His interest, however, is always speculative; he does not, like most mystics of the fourteenth century, lay chief stress on the mystical absorption in God, but offers a rational interpretation of the whole Christian scheme of life. His mysticism is an intellectual mysticism.

Meister Eckhart

With Neoplatonism, Eckhart regards Deity as an inconceivable, indefinable spiritual substance, as a limitless potency in which all things are united. The beginning and the end is the hidden darkness of the eternal Godhead, unknown even to itself. Conceived in this transcendent sense, as the inexpressible being, God cannot reveal himself; he becomes manifest only in the Trinity. In an eternal process the three persons flow out of, and back into, the divine nature. The Deity can become God only by thinking himself, and in order to think himself he needs the Trinity and the world. God must know himself, act and communicate himself, and will the good. All this Eckhart conceives as a timeless changeless process; he applies human categories to the Absolute, and then withdraws them again as unsuitable to a transcendent being.

The Absolute is the ground of the world; in him dwells the system of eternal ideas, as the work of art in the mind of the artist. The world is an eternal creation. God was not God until ideas were; in this sense all things are in God, and God in all things. The finite mind perceives plurality; the timeless and spaceless mind sees all things whole: in God's mind everything is an eternal now. In order to avoid pantheism, Eckhart dis-

tinguishes from the unified ideal world a world of creatures, a copy of the other, a temporal world created out of nothing; it is the overflow of the divine essence, as it were, and yet contained in the divine essence; it is in God and yet not identical with God, its imperfections do not touch him. God cannot be conceived without creatures; he can no more do without them than they without him. In the soul of man, however, he finds his true rest.

Knowledge is the highest function of the soul; and the highest stage of this knowledge is superrational. It is a supernatural contemplation, transcending space and time; seeking to become one with its object, God, it rises beyond the plural, the temporal, and the external. The soul is able to accomplish this by means of a divine "uncreated spark;" its union with the divine mind is not our own act, but the act of God in us. The whole process of knowledge is an ascent from particulars to unity; it does not stop until it has passed beyond all differences and has entered "the silent desert into which no difference has ever penetrated, which is immovable and supreme over all oppositions and divisions."

Morality consists in bringing the soul back to God. In order to realize the purpose, man must negate his individuality, which, after all, is a mere accident, a nothing: "put off the nothing, and all creatures are one." "Whoever would see God must be dead to himself and buried in God, in the unrevealed desert Godhead, to become again what he was before he was." "The highest degree of self-estrangement is poverty. He is poor who knows nothing, desires nothing, and has nothing. So long as a man still has the will to do God's will or craves God or eternity or any particular things whatsoever, he is not yet quite poor, and not yet quite perfect." "Act for the sake of acting, love for the sake of loving; and even if there were no heaven or hell, love God for his goodness." "Morality consists not in doing, but in being." Love is the principle of all virtues, it strives for the good, it is nothing but God himself. Salvation does not depend on outward forms of conduct like fasting and mortifying the flesh. Only the spirit in which the deed is done is good; hence all virtues are one, there are no degrees of virtue. The right act will follow from the right principle. So long as you

can do anything that is contrary to God's will, you do not yet possess the love of God. It is not to be understood that a person should spend all his time in contemplation; mere contemplation would be selfishness. If any one, in a state of ecstasy, knew of a poor man needing relief, it would be far better for him to put an end to his ecstasy and serve his needy brother.

Through grace man becomes reunited with God. By becoming an individual I give God his goodness and am constantly giving it to him, for I am making it possible for him to communicate himself. God cannot know himself without the soul; in so far as I am immanent in the essence of Deity, he performs his works through me; and everything that is an object of his understanding, that am I. In returning to God, I become one with God again; God has become man in order that I may become God.

The followers of Eckhart neglected the speculative side of mysticism, in which he was particularly interested, and emphasized the practical religious side. The substance of Eckhart's mysticism is reproduced in a book, composed in Frankfurt on the Main, and later discovered by Luther, who published it under the title *A German Theology* (*Eine deutsche Theologie*). It made a deep impression upon the great reformer.

35. The Progress of Free Thought

Medieval Rationalism

It was the mission of the Middle Ages to prepare the new peoples for the reception and continuation of classical Christian civilization. The task was undertaken by the Church, who acted as the spiritual ward of these peoples. But it inevitably came to pass that the child should grow into manhood and that the days of tutelage should end. This time had now arrived, and we enter upon a new phase of the history of philosophy. It must not be supposed, however, that there was a sudden break,—such breaks rarely occur in history,—the new period was simply the outcome of a long process of evolution and carried over from the past many of the characteristics of that past. Scholasticism itself had been the result of a yearning for rational insight, of a desire to understand and find reasons for what it believed. It represented the same spirit of reflection and inquiry which had led

to the construction of great metaphysical systems in the golden age of Greek thought. It is true, the goal of its search was fixed by faith: philosophy served as its handmaiden; but within its circumscribed bounds human reason had a fairly free swing. The attitude of the Middle Ages toward rational knowledge is by no means the same as that of the early Christians. Primitive Christianity did not glorify the intellectual achievements of man or expect to enter the kingdom of heaven through the portals of speculative reason. "Where is the wise? where is the scribe? where is the disputer of this world?" St. Paul asks, "hath not God made foolish the wisdom of this world? For after that in the wisdom of God, the world by wisdom knew not God, it pleased God by the foolishness of preaching to save them that believe." This is not the spirit of the scholastic Middle Ages. The Fathers and the doctors of the Church are eager to understand, they are bent on rationalizing their faith; they desire to know God by wisdom. They did not study the world as we study it, they did not pursue truth in the independent manner of the Greeks, but that was because they were so thoroughly convinced of the absolute truth of their premises, the doctrines of the faith. These were their facts, with these they whetted their intellects, these they sought to weld into a system. Their interest lay in a transcendent world and in the relation of our earthly life to the spiritual kingdom; the occurrences of nature left them cold except in so far as they saw in them the workings of the divine plan. What cared they for petty details so long as they understood the really valuable transcendent truths? The Church did not oppose scientific studies as such; it was convinced that no facts could be discovered which would not prove the great and fundamental truths, and so it brushed them aside.

It must also be remembered that the spirit of independence and opposition to authority was never entirely extinguished, though it lay smoldering for a long time. It manifested itself in the political sphere in the struggles of Church and State, which began early and were carried on with fierceness on both sides. The victory passed from popes to emperors and kings and back again. The reign of Gregory VII (1077) marks a triumph for the Church: Henry IV of Germany goes to Canossa to do penance and to pay homage

Rise of Nationalism

to the Pope. The power of the Church reached its climax during the papacy of Innocent III (1198-1216); but from that time on it declined. Philip IV of France (1285-1314) met with success in his war with Pope Boniface VIII and caused the removal of the Papal See to Avignon, where it remained from 1309 to 1376. It was during this period that nominalism and German mysticism, two independent movements, made such headway. The great schism in the Papacy lasted from 1378 to 1415; during these years two popes ruled; at one time three. The Babylonian captivity at Avignon and the schism were terrible catastrophes to the Church; how could she claim either temporal or spiritual supremacy when she was divided against herself? The unfortunate situation suggested to the University of Paris the idea of a national Church; if the world could go on with two popes, why might not each nation have its own primate? Objection was also raised to the absolutism of the Pope within the Church itself, and the demand made that since the Church is superior to the Pope, he ought to be subordinate to a Council.

Here we have the struggle between nationalism and ecclesiasticism and between democracy and absolutism. Back in the twelfth century Arnold of Brescia had opposed the temporal power of the Church and established a republic in Rome, but it was short-lived and Arnold died on the scaffold (1155). At first the church writers side with the Church, but gradually opposition arises within her ranks against the temporal power of the Roman See.

Among those favoring Church supremacy were nearly all the old orthodox schoolmen, and, during the fourteenth century, Augustinus Triumphus (+1328) and Alvarus Pelagius (+1352). Dante (1265-1321), in his *De monarchia,* favors the supremacy of the Emperor in worldly affairs, and of the Pope in spiritual affairs. Joachim of Floris, William of Occam (+1347), Wyclif (1327-1384), and Marsilius of Padua (+1343), all oppose the temporal power of the Church. Marsilius teaches an imperialistic theory of the State, the doctrine of popular sovereignty, and the contract theory.

Lecky, *History of the Rise of Rationalism in Europe,* chap. v; E. Jenks, *Law and Politics in the Middle Ages;* Gierke, *Political Theories of the Middle Age,* transl. by Maitland; Bryce, *Holy Roman Empire;* Robertson, *Regnum Dei;* Troeltsch, *Die Soziallehren der christlichen Kirchen.*

It must also be remembered that the heretical tendencies which began with the attempt to make a platform for Christianity never disappeared. We have had occasion, in tracing the evolution of the dogma, to speak of numerous sects whose teachings were antagonistic to orthodox doctrines. Marcion (*c.* 130), an extreme adherent of the Pauline faction of the new religion, who condemned everything Jewish and Petrinic, became the father of a movement that continued in some form or other for centuries. We find the descendants of the Marcionites, the Paulicians, in Armenia and Asia Minor from the fifth century onwards; the Bogomils in Bulgaria from the tenth on. In the eleventh century, a sect called Cathars or Cathari, with similar teachings, appeared in Southern France. For centuries the Church waged a relentless war against the Albigenses, as this sect came to be named, and with the aid of the terrible Inquisition succeeded in destroying it, root and branch. In the twelfth century a similar sect arose in Northern Italy, the Waldenses, founded by Peter Waldo in 1170, which, under the name of the Vaudois, is in existence to-day. Waldo emphasized the doctrine of justification by faith, preached repentance, favored sermons rather than ritual, opposed the confessional, dispensations, relics, worship of saints, and transubstantiation. He made the Bible the criterion of faith, and had the New Testament translated for general study.

Heretical Tendencies

In the fourteenth and fifteenth centuries we have the great reform movements inaugurated by Wyclif (1327-1384) in England and continued by John Huss (1369-1415) in Bohemia. Wyclif opposed the church system, saint-worship, celibacy of the clergy, monasticism, the mass, transubstantiation, hierarchical government, the primacy of the Pope; he demanded a return to the original congregational organization and the independence of Church and State. With the desire for religious reform came a desire for political and social reforms: Wat Tyler in England and Thomas Münzer in Germany become the leaders of social revolution.

Signs of a similar independence of thought are found in those who refuse to accept the orthodox philosophy. We have already spoken of the pantheism of Scotus Erigena, which was

anathema to the Church, and of the pantheists Joachim of Floris, Simon of Tournay, Amalric of Bennes, and David of Dinant, who exhibited a remarkable freedom in their thinking. The pious mystics of St. Victor shake the very foundations of scholasticism in denying the possibility of a union of reason and faith, science and religion. Even among the regular schoolmen we find liberal tendencies in the twelfth century. The fact is when men begin to think, they are apt, in spite of their orthodoxy, to run counter to the prescribed doctrine now and then. Anselm, whose sole aim was to rationalize the faith, comes dangerously near, at times, to contradicting the dogmas of the Church, as Augustine and Scotus Erigena had done before him. Roscelin's reflections on universals landed him in an out-and-out heresy. The entire life of Abelard impresses one as a conflict between intellectual integrity and loyalty to the Church. Sparks of the spirit of independence are visible in the writings of Bernard of Chartres, William of Conches, Gilbert of Poirée, and John of Salisbury, all bishops of the Church; and the discussions in Peter the Lombard's *Summa* betray an intellectual curiosity which augured well for the future of thought. Many of the questions which the thinkers of the age considered with all seriousness, seem barren and foolish to us, but that is because our outlook on life has changed; considered in connection with their medieval religious background, they represent the workings of the inquiring mind.

Spirit of Free Inquiry

The thirteenth century turns from Platonic realism to Aristotelian realism. The interest which the age showed in Aristotle was itself a sign of freedom of thought. Aristotle was a pagan, and, besides, the knowledge of his writings had come to the Western world from the "infidel" Arabians. The Church, quite naturally, at first condemned his philosophy, but soon adapted it to its needs, and made it the official ecclesiastical system. The new world-view helped to strengthen the bonds of union between reason and faith, which were being loosened at the beginning of the thirteenth century. In this respect, it is true, Aristotelianism served as an antidote to the liberal tendencies of the age and stemmed the tide of free thought. At the same time, it contained within itself elements that proved

dangerous to scholasticism and encouraged the spirit of independence. By placing a heathen philosopher on so high a pedestal, the Church widened the intellectual horizon of men and increased their respect for the achievements of antiquity. The Aristotelian system also helped to arouse an interest in the study of nature, and this in time proved to be a great stimulus to free inquiry. It formed the bridge from Platonic realism to nominalism and thus to modern science. Aristotle's philosophy was naturalistic, Christian thought supernaturalistic; and although Thomas Aquinas attempted to supplement Aristotle's world-view by the introduction of supernaturalism, the contradiction between the two lines of thought was there. And when the contradiction was brought out, as it had to be brought out sooner or later, the great respect in which Aristotle had come to be held made his heterodox theories palatable.

Aristotle's philosophy, therefore, was a Greek gift after all, and led to the dissolution of scholasticism. St. Thomas builds on Aristotle and constructs a system that is satisfactory to the Church. But Duns Scotus, too, who was not made a saint, believes that he is carrying out the Aristotelian thought in opposing the rationalistic, realistic, and deterministic conceptions of Thomas. By emphasizing the reality of particulars, as he did, he tacitly assumed the importance of the particular human being and the worth of the individual conscience. His doctrines also paved the way for empiricism and nominalism. If God is not determined by his reason to create the world, then the laws of nature are not necessary, and cannot be deduced by reason from the reason of God. Things are what they are because God made them so; they might have been otherwise and may change whenever God so wills it. Hence, in order to know what nature is and how nature acts, we must observe nature; experience is the source of our knowledge. Moreover, if particulars are the ultimate realities, how else can we know them except empirically?

William of Occam boldly developed certain implications of the Scotian teaching and attacked the very foundations of scholastic thought. If universals are not real, they are mere words; if theology is a barren science, let the Church cast it off. Faith should take the place of reason. Let us dissolve the

Church's alliance with reason and the world, and return to the simple belief and the democratic organization of the spiritual Church of Apostolic times.

Mysticism had always shown a distaste for rational theology. But in spite of their anti-rationalistic leanings, the mystics of the twelfth and thirteenth centuries remained true to the established doctrines of the Church. In the fourteenth and fifteenth centuries, however, they became pantheistic and nominalistic, as we have seen, and their teachings, though offered in the interests of a spiritual religion, contributed greatly to weaken the scholastic system and the influence of the visible Church.

PHILOSOPHY OF THE RENAISSANCE

36. The New Enlightenment

Reason and Authority

The tendencies which we have outlined,—the development of nationalism, the heretical currents of thought, mysticism, the antagonism to the scholastic alliance of theology and philosophy,—are the forerunners of two great reform movements called the Renaissance and the Reformation. The times were beginning to find fault with the old traditions, the old language and literature, the old art, the old theological systems, the old political relations of Church and State, the old authoritative religion. The spirit of reflection and criticism, which had been silently quickening, broke out in open revolt against authority and tradition: in the revolt of nation against Church, of reason against prescribed truth, of the individual against the compulsion of ecclesiastical organization. The conflict between Church and State had been settled in favor of the State, but within both Church and State themselves the desire for political, economic, religious, and intellectual liberty was forming. It found partial realization in the Renaissance and Reformation; later on it expressed itself in modern philosophy and in all the influences which are still at work in the struggle for human liberty and enlightenment.

Slowly but surely the authority of the Church is weakened in the field of the mind, and the individual begins to assert his intellectual independence. Reason displaces authority in phi-

losophy, and philosophy cuts loose from guardianship. The notion begins to prevail that truth is something to be achieved, something to be won by free and impartial inquiry, not something to be decreed by authority. The interest of medieval thinkers was largely centered on supernatural things: theology was the crown of the sciences. The new age turns its gaze from heaven to earth, and natural science gradually pushes its way to the front. The same independent spirit manifests itself in religion. The individual throws off the fetters of the Church and appeals to the Bible and conscience as his standards. He refuses to accept a human intermediary between himself and his God, and longs for a personal communion with the object of his faith.

Consult the general histories of philosophy and special works mentioned on pp. 4, f.; also the bibliography on the history of modern philosophy given on p. 252; and the following: Fischer, *History of Modern Philosophy,* vol. I, Introduction, chaps. v, vi; Paulsen, *System of Ethics,* pp. 126, ff.; W. H. Hudson, *The Story of the Renaissance; Cambridge Modern History,* vol. I; Graves, *History of Education during the Middle Ages,* Part II, and *Petrus Ramus;* Munroe, *History of Education,* chap. vi; Lecky, *The History of the Rise of Rationalism in Europe;* A. D. White, *History of the Warfare of Science with Theology;* Symonds, *The Renaissance in Italy,* 7 vols.; Burckhardt, *The Culture of the Renaissance,* 2 vols., transl. by Middleman; Voigt, *Die Wiederbelebung des klassischen Altertums,* 2 vols.; Carriere, *Die Weltanschauung der Reformationszeit;* Hagen, *Deutschlands litterarische und religiöse Verhältnisse im Reformationszeitalter;* Peschl, *Geschichte des Zeitalters der Entdeckungen;* Troeltsch, *Soziallehren der christlichen Kirchen.*

Bibliographies in Ueberweg-Heinze, Part III, vol. I, §§ 2, ff.; Falckenberg, *History of Modern Philosophy,* pp. 15-63; and *Cambridge Modern History,* vol. I.

When the age turned its back upon the past and yearned for new things, two ways lay open to it: it could either create new forms of life and art and thought or revert to antiquity for its models. The latter course was chosen first. Accustomed as the medieval mind had been to authority and tradition, it was unable at once to strike out new paths for itself. The intellectual reformers turn to classical antiquity for inspiration; the culture of Greece and Rome is revived or reborn (Renaissance) and humanity is rediscovered (Humanism).

Humanism

With the fifteenth century comes the awakening of the Western world to an appreciation of the long neglected heritage of classical civilization. A hundred years before, the Italian poets Dante (1265-1321), Boccaccio (+ 1375), and Petrarch (+ 1374) had cultivated a taste for the classics, and had used the mother-tongue as a literary instrument. Laurentius Valla (1406-1457) now purifies the barbarous Church Latin and makes Cicero and Quintilian the models for Latin style. Manuel Chrysoloras (+ 1415) is the first Greek to become a public teacher of the Greek language and literature in Italy; and his pupil Leonardus Aretinus (+ 1444), the translator of Platonic and Aristotelian works, arouses a widespread interest in Greek studies among the Italians. In 1438 and, later, after the fall of Constantinople (1453), Greek scholars flock to Italy, and the treasures of art and literature which had been preserved, enjoyed, and studied in the Eastern Empire while the Occident was steeped in "Gothic barbarism" are revealed to the willing pupils in the West. Humanism finds its way into the ecclesiastical and secular courts, and spreads until even the universities are touched by its influence. The Popes themselves are affected by the new culture; Nicolas V (1447-1455) founds the Vatican Library, Julius II (1503-1513) rebuilds the Church of St. Peter, and it is said of Leo X (1513-1521) that he found more pleasure in the study of the classics than in Christian theology. Interest is aroused in human achievements; man is glorified, human genius exalted, and human talents no longer counted as insignificant or despicable, hence the honors showered upon the poets, orators, and historians of the times. Art and architecture are humanized, as it were: medieval art, expressive of the spirit of world-denial, suffering, and death, gives way to the art of the Renaissance, which is an expression of the natural joy of life.

37. New Philosophies

Several features are noticeable in the philosophy of the Renaissance. At first the systems of the ancient Greeks are studied and imitated. The entire scholastic method is attacked as barren word-wisdom and dialectical hair-splitting, and efforts are made to introduce a new logic. Here and there original theories are offered, but they are gen-

Platonism

erally crude and inevitably relapse into the old traditional way of looking at things. The scholastic elements are, however, gradually sloughed off; the ancient patterns are no longer slavishly followed, thought becomes more independent and original, until, at last, we reach the phase of development which is called modern philosophy.

The first important task to be undertaken was the study of the ancient philosophers. A Greek named Pletho came to Italy in 1438 to participate in a council called together at Florence to discuss the union of the Eastern and Western Churches. Persuaded by Cosmo di Medici to remain in Italy, he established the Florentine Academy (1440) for the purpose of teaching and defending the Platonic philosophy. The entire body of Plato's works now for the first time became accessible to Western scholars, and reformers were enabled to place a rival in the field against the church philosopher Aristotle. But they interpreted the great idealistic system, after the fashion of the entire East, as Neoplatonism. Pletho's Hellenism was so intense that he sought to revive the old Greek cult in an allegorized Neoplatonic form. He wrote a work comparing the doctrines of Plato and Aristotle.

Pletho is followed in the school by Bessarion (author of a work *Against the Calumniators of Plato,* 1469), who defends Plato against his Aristotelian compatriots, Gennadius, Theodorus Gaza, Georgius of Trebizond. His pupil Marsilius Ficinus (1433-1499), a Florentine, who regards Plato's philosophy as the quintessence of wisdom and the key to Christianity, succeeds him. Marsilius edits and translates Plato and the Neoplatonists, and writes commentaries on them. All these thinkers are opposed to the church system of philosophy.

The only original system of thought offered in the fifteenth century, one that does not follow the beaten track of scholasticism, is that of Nicolas of Cusa (Krebs of Kues or Cusa, 1401-1464). Nicolas was educated by the mystical Brothers of the Common Life at Deventer, studied mathematics, jurisprudence, and theology at Heidelberg and Padua, and became a Bishop and Cardinal of the Church. Like many philosophies of the Renaissance and even an earlier period, the Cusan's world-view is a mixture of medievalism and modern thought. It shows the influence of German mysticism, Neoplatonism, and the Pythagorean number-theory, and oscillates between pantheism and the Christian dualistic conception of God and the world.

Nicolas of Cusa

De docta ignorantia, 1440; *De conjecturis,* 1440; *De pace seu concordantia fidei,* 1453 (a remarkable example of the spirit of religious

tolerance. See G. L. Burr, "Anent the Middle Ages," *American Historical Review,* vol. XVIII, No. 4). Bibliography in Falckenberg, *History of Modern Philosophy,* and in Ueberweg-Heinze, *op. cit.,* Part III, vol. I, § 7.

Nicolas shares the nominalistic view of the incompetence of reason as a source of knowledge of God. He holds, however, that we can have an immediate intuition of him, a "vision without comprehension," as the mystics taught, and that this may be reached by ecstasy. It is a state of learned ignorance (*docta ignorantia*), in which discursive thought is transcended. God is the infinite substance of all that is real in things; in him essence and existence, potentiality and reality are one; he is pure and infinite actuality, absolute potentiality, absolute knowledge, absolute will, absolute goodness. In him all contradictions are comprehended; he is the *coincidence of opposites,* and cannot, therefore, be grasped by conceptual thinking. Indeed, negations alone are true and affirmations inadequate in theology. Nicolas is unwilling to qualify God in any way: the infinite God can be attained only by one who knows that he is ignorant of him.

The world is the explication of God, unity differentiated into plurality; it is the copy of God, an animated whole, in every part of which he is present in the fullness of his power. He is the maximum in that he is unlimited and embraces all things; he is the minimum in so far as he is present in every particular thing. In this sense, "each actual thing is a contraction of all things," God being potential in it. All this is thoroughgoing pantheism. But left as it stands, it would be pure heresy, and Nicolas tries to square his theory with orthodox dualism by conceiving the world as different from God: the essence of things is not the same as the divine essence; they are finite and do not completely realize the divine ideas; they are contingent and do not follow necessarily from God's being.

The True Aristotle

Other thinkers were becoming acquainted with the real Aristotle and beginning to note the differences between him and the scholastic conception of him, which had been influenced by the Neoplatonic interpretations of the Arabians. The Aristotelians split into two parties, some following Averroës, others Alexander of Aphrodisias, in the interpretation of the Peripatetic system. In a tactful way they antagonized the Aristotle

of the Church. Thus, Pietro Pomponazzi (1462-1524), a professor at Padua, in his book *De immortalitate animæ,* 1516, declares that Aristotle did not teach personal immortality, that such a thing is physically impossible and morally unnecessary.

Other works of Pomponazzi: *On Magic; On Fate, Free Will,* etc. See Douglas, *Psychology and Philosophy of Pomponazzi.*

A school of Averroists existed in Northern Italy (Padua), largely composed of physicians and natural scientists, who interpreted Aristotle in the Averroistic sense, accepting the doctrine of one universal intellect and denying the immortality of the soul. When the new Aristotle became known, however, the school changed its position, and followed the interpretation of Alexander of Aphrodisias.

Other representatives of Aristotelianism were Porta (+1555), Scaliger (1484-1558), Cremonini (1552-1631), and Rudolph Agricola.

An attempt is also made to reconcile Platonism and Aristotelianism; from the Platonic side by John Pico of Mirandola, and from the Aristotelian side by Andreas Cæsalpinus (1519-1603). Other thinkers of the times seek to revive Epicureanism and Stoicism; and the latter in its Roman form became quite popular with the educated classes.

Reform of Science and Philosophy

The Spaniard Ludovico Vives (1492-1540) opposes not only the scholastic system, but its entire method of substituting authority for experience. The nominalistic philosophy led the way to such a view. He severely criticises scholastic sophistry and the different sciences in his dialogue *Sapiens* and in his main work, *De disciplinis.* Instead of confining ourselves to the study of Aristotle in natural science, he thinks we should make independent investigations of nature; instead of indulging in metaphysical speculations, we should observe the phenomena themselves,—experiment and reflect on them. He also recommends an empirical study of the soul; we ought to inquire not into the essence of the soul, but attempt to discover how it acts. Vives also offers a metaphysic in which, as in scholasticism, the notion of God forms the central doctrine. He shows the nominalistic influence, however, in his critical attitude with respect to the solution of ultimate problems, placing greater value on the ethical significance of belief in God and the immortality of the soul than on the arguments advanced for them.

Petrus Ramus (Pierre de la Ramée, 1515-1572), who was influenced by Vives, attacks also the Aristotelian logic in his *Animadversions on Aristotle's Dialectics,* 1543, accusing it of corrupting the natural logic of the human mind, and holding the great Greek thinker responsible for the barren dialectical

method current in the universities. In the *Institutions of Dialectics,* published at the same time, he offers a new logic, which is to be an art of disputation (*ars disserendi*), and shall consist in first finding a principle and then establishing its proof. In a later work he rejects the *Organon* ascribed to Aristotle as spurious and calls himself the only genuine Aristotelian. In criticising the scholastic methods of instruction and demanding educational reform, he is the forerunner of Bacon, Descartes, Locke, and, indeed, of nearly all the early modern philosophers who had chafed under the curriculum of the School. He, more than any one else, expresses the spirit of humanism in the field of education.

Reform of Logic

38. Philosophy of Nature and Natural Science

We have spoken in the preceding pages of the interest in the study of nature which was beginning to manifest itself in this age of enlightenment. The desire to unravel the mysteries of the external world assumes a fantastic and charlatanical form in many of the bolder spirits of the times. Instead of employing the method of observation and experiment, they hope, in their impatience, to force the secrets of nature by occult means, by a special inner revelation superior to sense-perception. To this group belong the Platonist John Pico of Mirandola (+ 1494), his nephew Francis (+ 1533), and Reuchlin (*De verbo mirifico,* 1494). They are enthusiastic students of the Jewish Cabala, or secret emanation-theories, which had been studied by the Jews from the ninth century on, and which were popularly supposed to go back to Abraham.

Occultism

Others, not content with penetrating the secrets of nature in this way, are eager to gain power over it, to compel it to do their bidding. But regarding it, as they do, as the manifestation of occult forces, they believe it possible to control natural phenomena by coming into communion with these spirits. They expect to accomplish their purpose by means of secret arts and symbols, mystic formulæ of all kinds, or by discovering the hidden numbers in which, according to the Pythagorean teaching, the book of nature is written. This is magic or theurgy. Since the planets, too, are under the domination of spirits, astrology

forms an important part of the doctrines of such lovers of the occult. They are also deeply interested in the magical transformation of metals, the art of making gold, or alchemy. Alchemy was placed in the service of medicine, and all kinds of secret compounds and tinctures, mixed in the most fantastic ways, were used to cure disease. In short, the entire movement was a search for the philosopher's stone, with the aid of which the profoundest secrets of nature were to be fathomed and complete control gained over it.

Agrippa of Nettesheim (1487-1535) and Theophrastus of Hohenheim (1493-1541), called Paracelsus, were leading figures in this group of wonder-men. Among later followers of Paracelsus are: R. Fludd (+1637), John Baptista van Helmont (1577-1644), and Francis Mercurius van Helmont (1618-1699).

The philosophical foundation of Paracelsus's conception of nature is Neoplatonism. Man is the microcosm, hence we can understand the universe only by studying man, and man only by studying the universe. Man possesses an elementary or terrestrial or visible body, a sidereal or astral or invisible body (the spirit), which comes from the sidereal region, and a soul, which has its origin in God. Hence, there are three great sciences: philosophy, astrology, and theology. These with alchemy form the basis of the science of medicine, and the physician should have knowledge of all of them. The so-called four elements, earth, water, fire, air, are composed of three basal substances, sal (the solid principle), mercury (the liquid), and sulphur (the combustible). Each of the four elements is ruled by elemental spirits, earth by gnomes, water by undines, air by sylphs, and fire by salamanders. Each particular thing has an archeus ruling it, and disease is the checking of this vital force by opposing terrestrial and astral forces. The secret of medicine is to support this vital force against its enemies by means of alchemy and magic.

This fantastic conception of nature, which presents a curious mixture of supernaturalism and naturalism, of mysticism and science, is finely portrayed by Goethe in his *Faust*. In Faust the spirit of the Renaissance is personified; the insatiable thirst for knowledge, the primitive methods of gaining it, the medieval prejudices and superstitions, the ensuing skepticism, the keen

longing for the exuberance of life,—all these are characteristics of the man standing at the turning-point of two eras.

There was nothing to cause astonishment in doctrines of the kind put forth by Theophrastus and his ilk. The view of nature as the abode of occult magic forces chimed in with the popular beliefs. Miracles were not unusual, saint after saint performed them during his life, and his relics exerted magic influence after his death. And men who occupied themselves with the hidden forces or the black arts could do wonderful things! At the end of the fifteenth century, a theologian named Jacobus Sprengel wrote a book on witchcraft, *Malea malefica,* in which he discussed, with all seriousness and in a scientific manner, the causes of witchcraft, its effects, and the remedies to be used against it.

In spite of its extravagances and superstitions, this movement may be said to mark progress. It is an attempt to study and control nature, and a precursor of modern science. The followers of the magic arts are still enamored of the occult theories and practices of medievalism, but their faces are turned toward the future. In the course of time the extravagant elements are stripped off, one by one; alchemy evolves into chemistry, astrology into astronomy, magic into experiment; and the mystical Pythagorean number-system fosters a taste for mathematics. It was an astrological motive that induced Copernicus to inquire into the mathematical order of the heavens. The longest way round is sometimes the shortest way home.

Cf. Lecky, *Rationalism;* A. D. White, *Warfare of Science with Theology;* Kiesewetter, *Geschichte des neuern Occultismus;* Rixner and Siber, *Leben und Lehrmeinungen berühmter Physiker,* etc.; Strunz, *Paracelsus;* A. Lehmann, *Aberglaube und Zauberei.*

Philosophy of Nature

In Italy we find a number of nature-philosophers who, though not entirely free from the old superstitions, such as alchemy and astrology, showed the true scientific spirit. Thus Girolamo Carden, or Cardan (1501-1576), a celebrated physician, mathematician, and scientist, tries to explain all things naturally. There are three elements, not four: earth, air, water; fire is not a substance at all, but an

accident (property) produced by heat, which is produced by motion. The world has a soul, which is identical with light and heat.

De subtilitate rerum; De varietate rerum; De vita propria (an interesting autobiography).

Bernardino Telesio (1508-1588; *De rerum natura*) has as his aim the reform of natural science, which is to be independent of Aristotle and the ancients and based on observation. Although his philosophy far surpasses the other nature-systems of the Renaissance, it is not free from Greek influence; traces of the Pre-Socratic " physiologers " and touches of the Stoic metaphysics are noticeable in it. He uses as his principles of explanation matter (which was created by God and remains constant in quantity) and force, with its opposing elements, heat and cold. Heat causes expansion and rarefaction in matter, and is the source of all life and motion; cold contracts and condenses, and is the cause of all fixity and rest. The universe owes its existence and changes to the constant opposition between these two principles. Even the soul (*spiritus*) is explained mechanically and materially by Telesio; it is a fine stuff consisting of heat, seated in the brain but diffused over the entire body by means of the nerves. It is the principle that holds the parts of the organism together and causes their motion. In addition to the material soul there is an immortal soul, which is superadded by God. In his ethics Telesio teaches that self-preservation is the sole object of man's striving.

Telesio was the founder of a natural-scientific society at Naples, the Telesian Academy. Francis Patrizzi (1529-1597) combines Neoplatonism with the Telesian principles.

The interest in external nature, which so frequently revealed itself during the Middle Ages and assumed such curious shapes, culminated in the scientific movement of which Leonardo da Vinci (1452-1519), Copernicus (1473-1543), Galileo (1564-1641), Kepler (1571-1630), and Newton (1642-1727) are the chief representatives. Here the occult and magic elements are completely eliminated, and the attempt made to explain the phenomena of nature in a perfectly natural way. The old Aristotelian principles of explana-

Scientific Movement

tion, forms or essences working on matter and causing it to realize the end or purpose of the form, are discarded for the mechanical explanation: all natural occurrences are caused by the motion of bodies, according to fixed laws. The secret of the planetary motions is revealed by mathematics: Kepler discovers the orbits of the planets, and astrology becomes astronomy. Robert Boyle (1627-1691) introduces the atomic theory into chemistry and, though himself an alchemist, puts the quietus on alchemy. This entire anti-teleological line of thought reaches its climax in the Darwinian theory of the nineteenth century, which seeks to explain organic forms causally and mechanically, without appeal to vital force or purpose of any kind in the things or outside of the things.

See the histories of natural science; also Lange, *History of Materialism;* Höffding, *Modern Philosophy,* vol. I, pp. 161, ff.; and works by Lecky, White, Rixner and Siber cited p. 235. Bibliography in Ueberweg-Heinze, Part III, vol. I, § 7.

Galileo was thoroughly acquainted with the theories of Democritus, whom he considers superior to Aristotle in philosophical acumen. All change he regards as nothing but change in the relation of the parts of objects; there is neither origin nor decay in the strict sense, everything being the result of the movement of atoms. Sensible qualities are subjective and are based on quantitative relations; all qualities are explained by quantities. Hence mathematics, which deals with quantitative relations, is the highest science: "the book of the universe is written in mathematical characters." Whatever we can measure we can know; what we cannot measure we cannot know; we can reduce the relations of motion to mathematical formulæ, hence we can explain occurrences in terms of motion and its laws. These laws, which form the basis of the study of mechanics, are discovered and formulated by Leonardo, Kepler, and Galileo. The work of Galileo and Kepler establishes the Copernican or heliocentric theory of astronomy, according to which the earth is no longer conceived as the immovable center of the universe, but, with all the planets, revolves around the central sun, which moves on its axis. The Copernican theory, though at first favorably received by the Church, was condemned as "pernicious to Catho-

lic truth " and placed on the Index in 1616. Galileo was forced to recant the Copernican theory in 1633, and remained under the surveillance of the Inquisition until his death, 1641. With the discovery by Sir Isaac Newton (1642-1727) of the law of gravitation in 1682, the theory is demonstrated: the laws which Kepler discovered are found to be necessary consequences of the law of gravitation.

Galileo rejects authority and mystical speculation in matters of science and declares that all our universal propositions should rest on observation and experiment. But, he says, experience needs to be supplemented by the understanding; induction itself goes beyond experience. We embrace facts under laws; we reduce facts to their simple and necessary causes by abstracting from the accidental circumstances; all this is *thought*. The ideal method of investigation is demonstration based on experiment, observation, and thought.

Pierre Gassendi (1592-1655) renews the doctrines of Epicurus and Lucretius, and opposes the corpuscular theory of the philosopher Descartes. At the same time, he supplements his mechanical theory with theological notions, making God the beginner of motion. Père Mersenne (1588-1648) and Robert Boyle (1627-1691) seek to reconcile Gassendi's atomism and Descartes's corpuscular view. Boyle introduces atomism into chemistry, but regards atomism as an instrument of method, not as a philosophical theory of the universe. The world points to an intelligent creator and designer, who initiated the motion. Newton held a similar theistic view.

39. Giordano Bruno and Tommaso Campanella

In the writings of the Italians Giordano Bruno (1548-1600) and Tommaso Campanella (1568-1639) we have comprehensive systems of metaphysics, conceived in the spirit of the new age.

Bruno joined the Dominican order, but left it and journeyed from city to city, a restless wanderer until he again set foot on Italian soil, in 1592, when he was imprisoned by the Inquisition. Refusing to renounce his convictions, he was burned at the stake (1600) in Rome, after an imprisonment of seven years.

Bruno

Della causa, infinito, ed uno; De triplici, minimo et mensura; De monade, etc.; *De immenso,* etc. Italian works edited by Croce and Gentile; Latin by Tocco; unpublished writings ed. by Lutoslawski and Tocco. German translations of complete works by Kuhlenbeck; English translations of *Spaccio* (Morehead), *Eroici* (L. Williams), and

Preface to *Infinito* (J. Toland). Plumptre, *Life and Works of Bruno;* A. Riehl, *G. Bruno,* transl. by Fry; McIntyre, *Bruno;* Gentile, *Giordano Bruno nella storia nella cultura.* Bibliography in Ueberweg-Heinze, Part III, § 7.

Bruno is impressed with the immensity of the new astronomical universe, and regards the fixed stars as planetary systems like our own. God is immanent in the infinite universe, the active principle (*natura naturans*); he expresses himself in the living world (*natura naturata*), which follows from him with inner necessity. With Cusa, he conceives him as the unity of all opposites, as the unity without opposites, as the one and the many, whom the finite mind cannot grasp.

The old Aristotelian forms, however, are not discarded in the system of Bruno. Each star is moved by a form or soul, and there is soul and life in all things. Form without matter does not exist, the two together constitute a unity; but forms arise and pass away in matter. All particular things change, but the universe remains constant in its absolute perfection.

To these teachings Bruno adds a doctrine of monads, or monadology, that reminds us of the Stoic germ-theory. Things are composed of uncaused and imperishable elementary parts called monads, which are both mental and physical. The soul itself is an immortal monad, and God is the monad of monads.

Tommaso Campanella (1568-1639), too, was a Dominican monk, and he, too, was persecuted by the Inquisition, having spent twenty-seven years of his life in prison on account of political ideals which he never attempted to put into practice. He, also, is a child of his age in that his thoughts both hark back to the past and point forward to the future. He tells us to study nature directly and not from books, that all our philosophical knowledge is based on sensation, that all higher forms of cognition are merely different forms of sensation. At the same time, nature is a revelation of God and faith is a form of knowledge,—the source from which theology springs.

Campanella

Philosophia sensibus demonstrata; Universalis philosophia, etc.; *Civitas solis.* Works ed. by d'Ancona.

In sensation we become aware of our own existence, of our own states of consciousness,—of how things affect us, not, how-

ever, of what they are in themselves. With Augustine before him and Descartes after him, Campanella finds in consciousness the pivot of certainty: whatever else we may doubt, we cannot doubt that we have sensations and that we exist. Introspection also reveals to us the three primal attributes of the soul: power, cognition, and will (*posse, nosse, velle*), which, in perfect form, are likewise the attributes of God, namely, omnipotence, omniscience, and absolute goodness. Campanella's assumption here is that since God is the ground of all things and man the little world (*parvus mundus*), the divine qualities must attach to the human soul in a finite degree. The same principles are present in all being; in the lower forms of existence, however, that is, when mixed with non-being, they appear as impotence, ignorance, and malice. The world, in other words, is conceived, with Neoplatonism, as a series of emanations from God; he has produced the angels, ideas, spirits, immortal human souls, space and bodies. We have an immediate knowledge of God, and he reveals himself also in the Bible; but we can prove his existence from our notion of an infinite being, an idea which we could not have produced ourselves and which therefore implies an infinite cause. This argument plays an important rôle in the later Cartesian system.

In his *City of the Sun (Civitas Solis)* Campanella offers a socialistic theory of the State that recalls Plato's *Republic.* It is a State of enlightenment (a city of the sun) in which power is governed by knowledge; the principle of equality prevails in it, there being no class distinctions except according to knowledge. Philosophers (priests) are the rulers, and it is to be a universal papal monarchy with religious unity, dominating the secular State. Education, which is to be universal and compulsory, will be based on mathematics and natural science, and the pupils are to be trained for their different occupations. Campanella also recommends learning by play, open-air schools, and object lessons.

40. New Theories of the State; Philosophy of Religion; and Skepticism

The attempt is also made by the age to work out a new theory of the State, one that shall be independent of theology and Aristotle, exhibiting, in this respect, the same opposition to authority and tradition that characterizes the other fields of thought. The orthodox schoolmen had defended the temporal power of the ecclesiastical hierarchy and the subordination of State to Church. Writers like Thomas Aquinas justified papal supremacy by arguments resting upon Christian and Aristotelian premises. The purpose of all human government, they held, is welfare; a ruler who serves that end is good, one who does not is bad and may be deposed. Since the supreme welfare of a people is its spiritual welfare, a sovereign who refuses to accept the Christian dogma, or even places himself in opposition to the Church, endangers the true good of his subjects, and such a course justifies rebellion. The Church is of divine origin; it is the vicegerent of God on earth and the court of last resort in matters of faith, and its function is to propagate the Christian religion. The State is, therefore, in the last analysis, subservient to the Church, and politics, like philosophy, is the handmaiden of theology.

Scholastic Theory of the State

See the histories of politics mentioned pp. 5, 223; also Höffding, *op. cit.*, pp. 38-58; Falckenberg, *op. cit.*, pp. 39-48; Lecky, *Rationalism*, chap. v; Giercke, *J. Althusius und die Entwicklung der naturrechtlichen Staatstheorie;* A. D. White, *Seven Great Statesmen.*

As has already been pointed out, this political theory and the efforts to put it into practice were opposed by the secular powers, and, in the centuries witnessing the decline of the papacy, by Catholic Christian writers themselves. During the period of the Renaissance and the Protestant Reformation, the opposition to the Catholic idea grew stronger, and the foundations were laid for the political theories which have played such an important rôle in the history of the modern era. The most radical attack came from the Italian diplomat Nicolo Machiavelli (1469-1527), secretary of the Chancellery of the Council of Ten at Florence, who had gained a discourag-

Machiavelli

ing insight into the political corruption of the Roman Curia and the Italian governments, and who presented his views in his *History of Florence* (1532), *Essays on the First Decade of Livy* (1532), and *The Prince* (1515).

Essay on Machiavelli in *Cambridge Modern History,* vol. I; Villari, *History of Machiavelli and his Times,* 2 vols.

The ideal of Machiavelli was a united, independent, and sovereign Italian nation, absolutely free from the domination of the Church in politics, science, and religion. Christianity, he held, discourages political activity on the part of the citizen and makes him passive; hence, the old Roman religion, which developed patriots, is preferable. The best form of government would be a republic of the type so brilliantly exemplified in Sparta, Rome, and Venice. But such a constitution is possible only where public spirit exists; when men are pure, freedom is a necessity. In times of corruption, however (like those in which Machiavelli lived), an absolute despotism is needed to realize the ideal of a strong and independent State, and civic freedom must be sacrificed. (How terrible the political conditions of his country were, may be seen from a study of the history of the countless petty despots of the Italian Renaissance.*) It is, therefore, right for the Prince to employ whatever means will lead to the nationalistic goal; force, deceit, severity, breach of the so-called moral laws are all justified by the great end; anything is preferable to the existing anarchy and corruption. Machiavelli's political thought is rooted in his abhorrence of the secular and ecclesiastical politics of his day; in his pessimistic conception of human nature,—which hunger alone makes industrious and law good,—and in his longing for a rational commonwealth. He saw no way out of the corruption and disorder of his age except by meeting force with force, trickery with trickery, and by fighting the devil with his own weapons; and he condemned halfway measures in the pursuit of the goal. He justified in theory what many politicians of Church and State have practised and continue to practise to this day, but he justified it only because he saw no other way of saving the State.

* Cf. Burckhardt, *The Culture of the Renaissance.*

The New Politics

It became necessary to construct a political theory independent of theology and the Church and in harmony with the new ideal of a sovereign State. The problem was not merely theoretical; the existence of different Christian sects naturally suggested the question of the relation of these bodies to the State and the Prince, and made a consideration of the meaning and source of sovereignty a practical necessity. In working out a new political philosophy, many of the theories of the medieval thinkers to whom we have referred were utilized and developed: the contract theory, the notion of popular sovereignty and the sovereignty of the ruler, the idea of natural law and natural rights. Lines of thought were marked out which led to the theories of Hobbes on the one hand, and those of Locke and Rousseau on the other, and found practical application in both absolutism and democracy.

Jean Bodin (1530-1596) teaches that the State rests on a social contract by which the popular sovereignty has been irrevocably transferred to the ruler. Johannes Althusius (1557-1638) regards the contract as conditional on the ruler's observance of his part of it; the sovereignty of the people cannot be alienated, the authority of the ruling functionary or functionaries is revocable; and the prince who violates the contract may be deposed or executed. The idea gains ground, partly owing to religious oppression, that the State ought not to interfere with the religious convictions of its citizens, and the right of revolution is upheld. Alberico Gentile (1551-1611) discusses the law of war in his book (*De jure belli,* 1588), and Thomas More offers a socialistic ideal of the State in his *Utopia* (1516).

The theory of absolutism, in moderate form, is accepted by Hugo Grotius (Huig van Groot, 1583-1645), a leader of the aristocratic party in Holland, and Samuel Pufendorf (1632-1694). Grotius is the author of the celebrated work *De jure belli et pacis* (1625), in which he presents a theory of natural rights that is an inheritance from Stoicism and Roman law. The natural or unwritten law (*jus naturale*) is rooted in the rational nature of man, it is unalterable and God himself cannot change it; positive law (*jus voluntarium* or *civile*) arises in history, is the result of voluntary enactment, and is based on the principle of utility. Society owes its origin to the social nature of man,

which is the source of love of neighbor and all other duties. In society natural rights are limited by regard for social welfare; whatever conduces to the existence of social life is also a natural right. The State, therefore, rests on reason and human nature; it is not an artificial creation of God, but a natural institution. It depends on the free consent of its members, that is, on contract; hence, the rights of the individual can never be abrogated. The people has sovereignty but may surrender it, for all times, to a monarch or a class. War between nations is justifiable only in case of violation of natural rights, but should be carried on humanely.

Translation of *De jure belli* by Whewell, 3 vols.

Other writers on politics are: Ayala, Oldendorp (+1561), Nicolas Hemming (1513-1600), Alberico Gentile (1551-1611), Benedict Winkler (+1648). Pufendorf is a follower of Grote and Hobbes, and introduces the notion of natural law into Germany; sovereignty implies unity of will and, therefore, the absolute right of the monarch.

Among the orthodox writers, the Protestants Luther and Melanchthon conceived the State as of divine origin, while the Jesuits Bellarmin (1542-1621) and Juan Mariana (1537-1624) advocated the contract theory and the doctrine of popular sovereignty.

These theories reflect the evolution of political ideas and political institutions after the medieval period. In the Middle Ages the State did not possess sovereignty in the sense in which modern states possess it. The medieval ruler had certain limited rights, and the feudal lords had their rights, but there was frequent conflict between emperors and kings and their vassals, and the power of the ruler depended on the good-will of his vassals and on his military strength. In Germany and in Italy the centralized State gradually divided into a loose federation of states after the breakdown of the feudal system and of the territorial lords. In France the tendency was the other way,—from a loose federation of states to a unified State or Nation with an absolute king. England remained a centralized State, but the king's power declined as the power of the people grew. In any case, however, the idea of the sovereignty of the State was only gradually developed, and it is only as the result of historical evolution that the State becomes sovereign and extends its func-

Evolution of the Modern State

tions, that is, becomes modern. The tendency at the beginning of the modern era was towards absolutism, which reached its climax in the last half of the seventeenth and the first half of the eighteenth century (Louis XIV); the power of the ruler was, theoretically, unlimited, the subject received whatever rights he might have from the State, which was incarnate in the ruler: *L'état, c'est moi,* so Louis XIV declared. The notion of the sovereignty of the State has remained intact; but the opposition to absolutism which was reflected in the theories of Althusius, Locke, and Rousseau gained ground and ended in the establishment of the constitutional monarchies and democracies of our era.

New Philosophy of Religion

The new philosophy offers natural or rational instead of supernatural explanations of things, as we have seen. It applies its method not only in metaphysical systems, but also in special fields of thought, among them politics and religion. Herbert of Cherbury (1583-1648) presents a philosophy of religion based on a theory of knowledge and independent of any positive or historical religion. He regards as rational or natural truths common to all religions: that there is one God, that he ought to be worshiped, that worship consists of piety and virtue, that we must repent of our sins, and that there are present and future rewards and punishments. These, in other words, are the beliefs to which a natural man, unhampered by prejudices and following his own reason, would come; they are truths implanted by nature. They belong to the group of *notitiæ communes* or universal notions, which are of divine origin and have as their distinguishing marks: priority, independence, universality, certainty, necessity (in the sense of utility), and immediacy. This original natural religion has been corrupted by priests, according to Herbert, but has been restored by Christianity. It may be supplemented by revelation, but the revelation must be rational. Herbert is the predecessor of the deists and the advocates of the theory of natural or rational religion in the eighteenth century.

De veritate, etc., 1624; *De religione gentilium,* 1645, transl. by Lewis, 1705; autobiography, ed. by S. Lee. Monographs by Rémusat and Güttler. Cf. Lechler, *Geschichte des englischen Deismus.*

A note of skepticism similar to that heard in nominalism and mysticism is found in a number of French thinkers of the Renaissance, who were influenced by Greek skeptical writings. Thus Michel de Montaigne (1533-1592), the author of the celebrated *Essays,* doubts the possibility of certain knowledge, for reasons with which we have become familiar in our account of Greek skepticism. He despairs of reason and recommends a return to uncorrupted nature and revelation. Although we cannot have knowledge, however, he urges, we can do our duty and submit to the divine commands. According to Pierre Charron (1541-1603), the skeptical attitude keeps alive the spirit of inquiry and leads us to faith in Christianity, the true religion. He emphasizes the practical ethical side of Christianity. Francis Sanchez (+1632), too, denies the possibility of absolute knowledge in the sense that finite beings cannot grasp the inner essence of things or understand the meaning of the universe as a whole, but holds that we can know secondary causes through observation and experiment. Later French skeptics are: La Mothe le Vayer (+1672) and the Bishop Pierre Huet (+1721). Joseph Glanvil (1636-1680), Hieronymus Hirnheim, of Prague (+1679), and, in a sense, Pierre Bayle (1647-1706), author of the *Dictionnaire historique et critique* (1695), belong to the same movement (see p. 291).

Skepticism

Montaigne's *Essays,* ed. by Courbet and Royer, transl. by Florio. Cf. Lévy-Bruhl, *Modern Philosophy in France;* works on Skepticism, p. 117; monographs on Montaigne by Stapfer, Dowden, Lowndes.

41. Religious Reform

The Italian Renaissance rebelled against authority and the scholastic system, and found inspiration in the literary and artistic products of classical antiquity. It was the protest of the head against intellectual coercion. The German Reformation is a religious awakening or renaissance: it is the protest of the heart against the mechanization of the faith. As humanism had turned to ancient philosophy, literature, and art for help, so the religious revival turns to the Bible and the simple faith of the early Fathers, especially St. Augustine, for support. In place of scholastic

Spirit of the Reformation

theology, the elaborate system of works and indulgences, and the ritualism of the cultus, the Reformation emphasizes inner religion and heart-worship: justification by faith instead of justification by works. The Reformation joins the Renaissance in its contempt of "barren scholasticism," its opposition to ecclesiastical authority and temporal power, and in its exaltation of the human conscience; but it does not go with it in its glorification of the intellect nor share its optimistic joy of life. Luther had come under the spell of the nominalistic mystics and looked upon reason with primitive Christian suspicion,—reason is blind in matters concerning the salvation of our souls; a thing may be false in philosophy and true in theology, in a theology rooted in faith,—and he despised the scholastic Aristotle no less than the true Aristotle.

But in spite of the anti-rationalistic attitude of the vigorous leader of the Reformation, the new religious movement fostered the spirit of critical reflection and independent thought no less than the Renaissance. In refusing to accept the Church as the arbiter of Christian faith and in appealing to the Bible and the conscience, it gave reason the right to sit in judgment on the doctrines of religion and encouraged rationalism and individualism. This is not what Luther aimed at, but it was an inevitable practical consequence of his protest against the authoritative Church and the authoritative theology, a consequence which Protestantism at large did not hesitate to draw. Indeed, the reformers themselves differed in their interpretation of important Christian dogmas, and the new church soon divided into separate sects: Luther accepts the mystical presence of Christ in the Eucharist; Zwingli, the most liberal of the reformers, regards the sacrament as a symbol; and Calvin teaches the doctrine of predestination, which the Catholic Church had refused to accept in spite of her respect for the great Augustine.

Protestant Scholasticism

Although Luther had rejected scholastic philosophy as barren word-wisdom, the new church soon felt the need of rationalizing the faith; in other words, of constructing a scholastic system of its own. The appeal to the Bible and the faith of primitive Christian times opened the door to all kinds of fantastic sects, which interpreted the Christian teachings according to their own lights; this is what hap-

pened in the case of the Anabaptists and Iconoclasts. With the organization of a new church, a religious platform became a practical necessity, and the movement which had sprung from mysticism, and had arisen as a protest against the mechanization of religion, now forgot its mystical origin and began to make dogma itself. The theologian who undertook the work of constructing a " Protestant system " in Germany was Melanchthon (1497-1560). He selected as most suitable for his task the Aristotelian world-view, " as that species of philosophy which has the least sophistry and the right method." The Epicureans were too godless for him, the Stoics too fatalistic, Plato and Neoplatonism too vague and heretical, the Middle Academy too skeptical. Luther, too, begins to see the need of a philosophical support for the Reformation. Melanchthon writes the text-books of Protestantism, using Aristotle as his guide, and becomes the *præceptor Germaniæ*. His books were used in Germany throughout the seventeenth century. The philosophy of Nicolaus Taurellus (Öchslein, 1547-1606) is a Protestant attempt to construct a scholastic system on an Augustinian basis. Its opposition to Aristotelianism represents the protest of the Augustinian-mystical wing of Protestantism against the official church doctrine. The conception of the universe as an order governed by law without divine interference shows the influence of the new natural science. Calvin likewise goes back to Augustine, as do also the Catholic Jansenists of Port Royal, while Zwingli follows Neoplatonism.

Mysticism of Jacob Boehme

Mysticism, however, continued to find a refuge among the common people; and its chief representatives, men like Osiander (+ 1552), Caspar Schwenkfeld (+ 1561), Sebastian Frank (+ 1545), and Valentin Weigel (+ 1594), protested against the scholasticism and formalism of the Reformation, as Luther himself had once thundered against Rome. At the beginning of the seventeenth century, mysticism again finds its voice in a comprehensive system offered by an uneducated German cobbler, Jacob Boehme (1575-1624), in his work *Aurora*.

Collected works ed. by Schiebler; selections from writings ed. by Classen; transl. by W. Law; monographs by Martensen (transl.), Deussen, and Lasson. Cf. books on Mysticism, p. 177.

Troubled by the fact of sin in the world, Boehme attempts to account for it as a necessary phase in the process of divine self-expression. Everywhere in reality he finds oppositions and contradictions: there is no good without evil, no light without darkness, no quality without its difference. Since all things come from God, he must be the primal ground of all opposition; in him all contrarieties of nature must lie concealed. Conceived as the original source of things, he is an undifferentiated, unqualified, motionless being: absolute quiescence, all and nothing, the fathomless ground, the primal objectless *will*. In order that this principle may manifest itself and know itself, it must become differentiated, it must have something to contemplate; as light needs darkness to be revealed, so God cannot become conscious of himself and express himself without an object. The divine blind craving gives rise to the oppositions which confront us in existence.

Significant in Boehme's world-view are the teachings that the universe is a union of contradictions, that life and progress imply opposition, that the ground of all reality lies in a spiritual principle (pantheism), that this principle is not fundamentally intelligence (as Eckhart had taught), but a groundless will (voluntarism), and that existence is a procession from darkness to light. Boehme attempts to trace the evolution of this process, combining Christian theological ideas (Trinity, angels, fall of Lucifer, fall of man, plan of salvation) with all kinds of fantastic notions, derived from the magical nature-philosophy of Paracelsus, which had found their way into German Protestant mysticism. As in Neoplatonism, the process must retrace its steps and return to its source: the concrete material world, which is the result of Lucifer's sin and a caricature of God, finds its way home to God; the material garment is cast off, and God contemplates the essence of things in their naked purity.

MODERN PHILOSOPHY

42. The Spirit of Modern Philosophy

Characteristics of the Modern Era

The history of the new era may be viewed as an awakening of the reflective spirit, as a quickening of criticism, as a revolt against authority and tradition, as a protest against absolutism and collectivism, as a demand for freedom in thought, feeling, and action. The leaven which had begun to work in the transition period of the Renaissance and the Reformation continued active throughout the following centuries and has not yet come to rest. The political conflict was settled in favor of the State, and the State gradually took the place of the Church as an organ of civilization: ecclesiasticism gave way to nationalism. Within the State itself there appeared a growing tendency towards constitutionalism and democratic institutions, which is still alive: the demand for equal rights and social justice is abroad in every land. The spirit of independence which had raised its voice against the authority of the Church in time attacked the paternalism of the State, and the doctrine of political non-interference became the ideal of the individualist. The same spirit found expression in the economic sphere: slavery, serfdom, and the old guild system gradually disappeared, the individual threw off his fetters, and demanded to be let alone (*laisser faire*) in working out his economic salvation.

We are confronted with the same phenomenon in the empire of the intellect, with the same antagonism to tutelage, the same demand for a free field. Reason becomes the authority in science and philosophy. As we pointed out before, the notion begins to prevail that truth is not something to be handed down by authority or decreed by papal bulls, but something to be acquired, something to be achieved by free and impartial inquiry. And the gaze is turned from the contemplation of supernatural things to the examination of natural things, from heaven to earth,—

theology yields her crown to science and philosophy. The physical and the mental world, society, human institutions, and religion itself are explained by natural causes. What characterizes the higher intellectual life of the period following the Middle Ages is an abiding faith in the power of human reason, an intense interest in natural things, a lively yearning for civilization and progress. Knowledge, however, let it be noted, is esteemed and desired not only for its own sake, but also for its utility, for its practical value: knowledge is power. Nearly all the great leaders of modern thought, from Francis Bacon onward, are interested in the practical applications of the results of scientific investigation, and look forward with an enthusiastic optimism to a coming era of wonderful achievement in the mechanic arts, technology, medicine, as well as in the field of political and social reform.

The individual likewise throws off the yoke of the Church in religion and morals; the appeal to reason in matters of the intellect is matched by an appeal to faith and the conscience in matters of belief and conduct; he refuses to accept an intermediary between himself and his God. However Luther may have differed from the leaders of the Renaissance, the influence of the Reformation eventually helped to quicken the spirit of religious, moral, and intellectual independence and contributed its share to the emancipation of the human soul from external authority.

Modern philosophy, in its beginnings, breathes the spirit of the modern times, the characteristics of which we have endeavored to describe. It is independent in its search for truth, resembling ancient Greek thought in this respect. It is rationalistic in the sense that it makes human reason the highest authority in the pursuit of knowledge. It is naturalistic in that it seeks to explain inner and outer nature without supernatural presuppositions. It is, therefore, scientific, keeping in touch with the new sciences, particularly with the sciences of external nature.

It is to be remembered, however, that although modern philosophy arose as a protest against the old scholastic system, it did not, and could not, completely break with the past. Traces of the scholastic philosophy remain in its blood for a long time

to come. The early modern thinkers constantly criticize the scholastic method, but many of the old conceptions are bodily taken over by them, and influence both their problems and their results. The theological bias is not entirely absent: Bacon, Descartes, Locke, Berkeley, and Leibniz all accept the basal doctrines of Christianity. It is true, we are not always able to judge the candor of their protestations, but even insincerity in this regard would be a proof of the theological influence.

Besides the works mentioned on pp. 4, f., and p. 228, consult: Royce, *The Spirit of Modern Philosophy;* Falckenberg, *History of Modern Philosophy,* transl. by Armstrong; Höffding, *Brief History of Modern Philosophy,* transl. by Sanders, and *History of Modern Philosophy,* 2 vols., transl. by Meyer; Calkins, *Persistent Problems of Philosophy;* Adamson, *Development of Modern Philosophy;* Fischer, *History of Modern Philosophy,* 10 vols., parts transl. by Gordy, Mahaffy, and Hough; Windelband, *Geschichte der neuern Philosophie,* 2 vols.; Zeller, *Geschichte der deutschen Philosophie seit Leibniz;* Reininger, *Philosophie des Erkennens;* Merz, *History of European Thought in the Nineteenth Century,* 3 vols.

Special works: Kronenberg, *Geschichte des Idealismus,* 3 vols.; Lasswitz, *Geschichte der Atomistik,* 2 vols.; Mabilleau, *Histoire d'atomisme;* Baumann, *Die Lehren von Raum, Zeit und Mathematik,* 2 vols.; Schaller, *Geschichte der Naturphilosophie;* König, *Entwicklung des Kausalproblems,* 3 parts; Foster, *History of Physiology;* Cassirer, *Das Erkenntnisproblem in der Philosophie und Wissenschaft in der neuern Zeit,* 5 vols.; Grimm, *Geschichte des Erkenntnisproblems;* Vorländer, *Geschichte der philosophischen Moral, Rechts- und Staatslehre;* Jodl, *Geschichte der Ethik,* 2 vols.; Dunning, *Political Theories from Luther to Montesquieu;* Troeltsch, *Soziallehren der christlichen Kirchen;* Pfleiderer, *Philosophy of Religion,* transl. by Stewart and Menzies, 4 vols.; Pünjer, *History of Christian Philosophy of Religion,* 2 vols., transl. by Hastie; Lecky, *History of the Rise and Influence of the Spirit of Rationalism in Europe;* histories of civilization by Buckle, Draper, Dean, Crozier. See also *Cambridge Modern History,* the *Britannica,* and other encyclopedias. Selections from works of philosophers by Rand.

Empiricism and Rationalism

Modern philosophies have been classified as rationalistic or empiristic according as they accept reason (*ratio*) or experience (*ἐμπειρία*) as the source and norm of knowledge. To avoid misapprehension, however, several points should be emphasized. (1) By rationalism we may mean the attitude which makes reason instead of revelation or authority the standard of knowledge. In this sense, all modern systems of philosophy are rationalistic; indeed, it is this characteristic which enables us

to classify them as modern. It is true, world-views are not wanting which seek the source of truth not in the intellect, but in feeling, faith, or intuition, but these faith- or feeling-philosophies, too, endeavor to construct theories which shall justify their methods of reaching the truth and the objects of their faith to reason. (2) We may mean by rationalism the view that genuine knowledge consists of universal and necessary judgments, that the goal of thought is a *system* of truths in which the different propositions are logically related to one another. This is the mathematical notion of knowledge which is accepted by nearly all the new thinkers as the ideal; whether they believe in the possibility of realizing it or not, they consider only such knowledge genuine as conforms to the mathematical model. (3) The question is also asked concerning the *origin* of knowledge, and this receives different answers in modern philosophy: (a) Genuine knowledge cannot come from sense-perception or experience, but must have its foundation in thought or reason: there are truths natural or native to reason: innate or inborn or *a priori* truths. Truths which have their origin in the mind itself are valid truths. This view, too, has been called rationalism; though some writers prefer to name it intuitionalism or apriorism. (b) There are no inborn truths: all knowledge springs from sense-perception or experience, and hence so-called necessary propositions are not necessary or absolutely certain at all, but yield only *probable* knowledge. This view has been called empiricism or sensationalism.

Empiricists may accept rationalism in the first and second senses; they may consider only such knowledge genuine as gives us absolute certainty, and, at the same time, deny the possibility of attaining real knowledge except perhaps in mathematics. If by empiricism is meant that our world of experience is the object of philosophy, that philosophy has to interpret the world of experience, then all modern philosophy is empirical. If we mean by it that we cannot know without experience, that *pure* thought, or thought absolutely independent of sense-perception, is impossible, then, again, modern philosophy is largely empirical.

Keeping all this in mind, we may characterize philosophers as rationalists (apriorists) or empiricists (sensationalists) ac-

cording to the answers they give to the question of the origin of knowledge. With these answers they generally connect their answers to the question of the certainty or validity of knowledge. Both schools of early modern times agree that sense-knowledge is not absolutely certain; rationalists declare that only rational or *a priori* truths, clearly and distinctly perceived truths, are certain; empiricists generally deny that there are such *a priori* truths, and hold that clearly and distinctly perceived truths are not necessarily certain. We may, therefore, classify Descartes, Spinoza, Malebranche, Leibniz, and Wolff as rationalists; Bacon, Hobbes, Locke, Berkeley, and Hume as empiricists. The rationalists are the descendants of Plato, Aristotle, and the schoolmen in their general theory of knowledge; the empiricists are the continuers of the nominalistic traditions. It is to be borne in mind, however, that these thinkers are not always consistent in carrying out their doctrines; we shall be guided in our rough classification by their general attitude toward the problem of the origin of knowledge.

Besides these movements, we find also the customary accompaniments with which we have become acquainted in medieval philosophy: skepticism and mysticism (faith-philosophy), both of which may develop from the soil of either empiricism or rationalism. David Hume's skeptical conclusions may be regarded as the result of certain empirical presuppositions of Locke, and Pierre Bayle's as the application of the rationalistic ideal of Descartes. Mysticism may flourish in both fields, as we have seen; many of the medieval nominalists were mystics, and many modern mystics build upon rationalistic foundations. In addition to all these currents, the old scholastic philosophy has been continued by Catholic scholars.

ENGLISH EMPIRICISM

Special works on English philosophy: Sorley, *Beginnings of English Philosophy,* in *Cambridge History of English Literature,* vols. IV, ff.; Forsyth, *English Philosophy;* J. Seth, *English Philosophers;* Fischer, *Bacon and his Successors,* transl. by Oxenford; T. H. Green, *Introduction to Hume,* in vol. I of Green and Grose edition of Hume's works, and vol. I of Green's works; McCosh, *Scottish Philosophy;* Pringle-Pattison, *On Scottish Philosophy;* Rémusat, *His-*

toire de la philosophie en Angleterre; Lechler, *Geschichte des englischen Deismus;* L. Stephen, *History of English Thought in the Eighteenth Century,* 2 vols., *English Utilitarians,* and *Essays on Free Thinking and Plain Speaking;* Lyon, *L'idéalisme anglais au XVIII. siècle;* Albee, *History of English Utilitarianism;* Whewell, *History of Moral Philosophy in England;* Mackintosh, *Progress of Ethical Philosophy,* etc.; Selby-Bigge, *British Moralists* (selections from writings); Graham, *English Political Philosophy from Hobbes to Maine;* Zart, *Einfluss der englischen Philosophie seit Bacon auf die deutsche Philosophie des 18. Jahrhunderts.* Cf. J. M. Robertson, *Pioneer Humanists, Short History of Free Thought,* and *Evolution of States.*

43. Francis Bacon

Francis Bacon is, in many respects, a typical representative of the new movement. He is opposed to the ancient authorities, to Aristotle and Greek philosophy no less than to the barren philosophy of the School. The eye of the mind, he tells us, must never be taken off from the things themselves, but receive their images truly as they are. The past has done nothing; its methods, foundations, and results were wrong; we must begin all over again, free our minds of transmitted and inherited prejudices and opinions, go to the things themselves instead of following opinions and dealing in words,—in short, do our own thinking. The foundation is natural science, the method induction, and the goal the art of invention. The reason so little progress has been made in twenty-five hundred years, is that the right methods of acquiring knowledge have not been followed. Some use the method of demonstration, but they start from principles which have been hastily formed or taken on trust and are uncertain. Others follow the way of sense, but the senses, left to themselves, are faulty; still others despair of all knowledge, but this attitude, too, is dogmatic and unsatisfactory. We must begin the work anew and raise or rebuild the sciences, arts, and all human knowledge from a firm and solid basis. This is the Great Instauration.

Reform of Science

All these ideas are modern, as are also the supreme self-confidence and optimism of our thinker. The very failures of the past inspire him with the hope and belief that an era of glorious achievement is at hand, that great things are going to happen, that with the abandonment of the fruitless science

of the past the face of the earth and of society will be changed. (See his *New Atlantis.*) The practical goal is constantly emphasized, " the end always to be kept in view is the application of the truth acquired to the good of mankind."

Bacon did not advance the cause of natural science by his own experiments nor, indeed, was he sufficiently acquainted with mathematics to appreciate the work of the great astronomers of the new era. And it can hardly be said that his theory of method exercised an influence on experimental science; science was too far along for that: in his own country William Gilbert (1540-1603), the well-known author of the book *De magnete,* 1600, had employed the inductive method in his researches before the appearance of Bacon's writings on the subject. He does, however, deserve the title of the trumpeter of his time, which he applied to himself, for he gave conscious expression to the new scientific spirit. He understood and emphasized the importance of systematic and methodical observation and experimentation in natural science; the other and most important phase of it, mathematics, he mentions and considers essential, but fails to make use of in his theory, simply because he does not know how.

Francis Bacon (1561-1626) devoted himself to law and politics, although, so he himself tells us, his chief interests lay along the lines of the studies to which he gave his leisure hours. Important offices and high honors were conferred upon him by Queen Elizabeth and King James I,—he was made Baron Verulam and Viscount St. Albans, and became Lord Chancellor. In 1621 he was accused of having accepted gifts from litigants in his official capacity as a judge, an offense which he confessed but which he declared had never influenced his decisions. He was found guilty, sentenced to imprisonment, heavily fined, and deprived of office, but received the king's pardon, and retired to private life.

Among the English predecessors of Bacon were: Everard Digby (+1592), professor of logic at Cambridge, who aroused an interest in the study of philosophy in his country. His Neoplatonic doctrine, which he combined with Cabalism, was opposed by Sir William Temple (1553-1626), who followed the logic of Petrus Ramus and antagonized Aristotle.

Bacon's celebrated *Essays* appeared in 1597, an enlarged edition in 1625; the Latin translation of them bears the title *Sermones fideles.* Among his other works are: *The Advancement of Learning,* 1605 (the Latin, enlarged and revised edition being entitled, *De dignitate et augmentis scientiarum,* 1623); *Cogitata et visa,* 1612; and the *Novum*

Organum, 1620, the new "organon" or instrument of knowledge, which attacks the old Aristotelian logic and aims at a reform of logic; it is written in aphorisms and is incomplete.

Complete works, in Latin and English, by Spedding, Ellis, and Heath, 7 vols., 2d ed., 1870; reprint of philosophical works, 1 vol., by Robertson, 1905; *English Works* by S. Lee, 1905; numerous eds. of particular works.

Spedding, *Letters and Life,* and *Life and Times;* Church, *Bacon;* E. A. Abbot, *Bacon;* Fowler, *Bacon;* Nichol, *Bacon;* S. Lee, *Great Englishmen of the Sixteenth Century;* Heussler, *Bacon;* Wolff, *Bacon und seine Quellen.*

The fruitlessness of science and philosophy in the past, Bacon thinks, has been due to the absence of a proper method. The unassisted hand and the understanding left to itself possess but little power. We must devise a new way of reaching knowledge, a new machine or organ for the mind, a new logic, a *novum organum.* The old logic is useless for the discovery of the sciences, it assists in confirming and rendering inveterate the errors founded on vulgar notions rather than in seeking after truth.

Inductive Method

But before describing the method in detail, our reformer insists that the mind clear itself of all false opinions, prejudices, or *idols,* of which there are four kinds. The idols of the tribe (*idola tribus*) are such as inhere in the very nature of the human mind, among them being the notion of final causes (teleology) and the habit of reading human desires into nature. The idols of the den (*specus*) are peculiar to the particular individual, to his peculiar disposition, his education and intercourse, his reading, the authority of those whom he admires, and the like. The idols of the market (*fori*) are the most troublesome of all; they come from the associations of words and names. Words are often used as names of things which have no existence, or they are the names of actual objects, but confused, badly defined, and hastily abstracted from things. The idols of the theater (*theatri*) are the result of false theories or philosophies and the perverted laws of demonstration.

Of such idols the mind must be freed and cleared; it must approach the task of knowledge pure and unadulterated. The end aimed at, let it be remembered, is to discover principles themselves,—not to conquer adversaries by words, but nature by works. We cannot realize this end without knowing nature;

in order to produce effects, we should know causes. Our present syllogistic methods will not avail; our present sciences are but peculiar arrangements of matters already discovered. The syllogism consists of propositions, propositions of words, and words are signs of notions. Hence, if the notions are confused and carelessly abstracted from things,—and that is the case,—there is no solidity in the whole superstructure. The notions, principles, and axioms used in the syllogism are all based on experience,—as indeed all principles or axioms are,—but on vague and faulty experience; they are hasty generalizations from experience. Our hope, then, is genuine induction. We must continually raise up propositions by degrees and in the last place come to the most general and well-defined axioms, in an orderly and methodical way. That is, we must combine the experimental and the rational faculties.

Induction does not consist in simple enumeration,—that is a childish thing. The aim of human knowledge is to discover the *forms,* or true differences, or the source of emanation, of a given nature or quality. By form Bacon means not what the realists meant, not abstract forms or ideas. Matter rather than forms, he tells us, should be the object of our attention; nothing exists in nature besides individual bodies which act according to fixed law. In philosophy the investigation, discovery, and explanation of this very law is the foundation as well of knowledge as of operation. This law he calls *the form,* a term which had come into general use; Telesio, whom Bacon mentions, speaks of heat and cold as active forms of nature. The form of heat is the law of heat, it is what determines or regulates heat wherever heat is found, it is what heat depends on. Whoever knows the forms, understands the unity of nature in substances most unlike; he knows what in nature is constant and eternal and universal, and opens broad roads to human power such as human thought can scarcely comprehend or anticipate. Bacon declares that the form or substantial self of heat is motion, it is the motion of the small particles of the body. The investigation of forms (causes) which are eternal and immutable constitutes metaphysics; the investigation of efficient cause and matter, and of the latent process, and latent configurations, constitutes physics. The application of the knowledge of forms

or fundamental laws of nature leads to the highest kind of invention. Bacon calls it magic, it is practical metaphysics. (Bacon is evidently thinking of the art of making gold.) The application of knowledge of material and efficient causes is mechanics or practical physics.

The most important causes or laws, then, which science has to discover are forms, and these are found by induction. (1) The form of a nature or quality (heat, for example) is such that, given the form, the quality infallibly follows. It is, therefore, always present when the quality is present, and universally implies it, and is constantly inherent in it. (2) Again, the form is such that if it be taken away, the quality infallibly vanishes. Hence, it is always absent when the quality is absent, and implies its absence, and inheres in nothing else. (3) Lastly, the true form is such that it deduces the given quality from some source of being which is inherent in more qualities, and which is better known in the natural order of things than the form itself. All this gives us the clue to our method of procedure. (1) A quality being given, we must, first, consider all the known instances which agree in the same quality though in substances the most unlike (the so-called positive instances). This is the Table of Essence or Presence (called by Mill the Method of Agreement). (2) Then we must review the instances in which the given quality is wanting (the so-called negative instances). The negatives should be subjoined to the affirmatives, and the absence of the given quality inquired of in those subjects only that are most akin to the others in which it is present and forthcoming. This Bacon calls the Table of Deviation or of Absence in Proximity. It is Mill's Method of Difference. (3) Then we take the cases in which the object of our inquiry is present in a greater or less degree, either by comparing its increase and decrease in the same object, or its degree in different objects. This is the Table of Degrees or Comparative Instances, called by Mill the Method of Concomitant Variations. Bacon mentions eleven other helps to the mind in discovering forms, each of which has its name: rejection, first vintage, prerogative instances, etc., but works out only three.

Bacon held that mankind must begin the work of science anew. It was natural, under the circumstances, that he did not offer

a complete theory of the universe himself; his office was to stake out the ground and to point the way to new achievements.

Program of Philosophy

To this end he planned his great work, or *Instauratio magna,* consisting of six parts, only two of which were completed: the *Encyclopedia* or *Advancement of Learning* and the *Novum Organum.* He divides the field of knowledge, or "the intellectual globe," into history, poesy, and philosophy, according to the faculties of the mind (memory, imagination, and reason), and subdivides each into numerous specialistic branches.

Philosophy is the work of reason; it deals with abstract notions derived from impressions of sense; and in the composition and division of these notions, according to the law of nature and fact, its business lies. It embraces: primary philosophy, revealed theology, natural theology, metaphysics, physics, mechanics, magic, mathematics, psychology, and ethics. Primary philosophy busies itself with the axioms common to several sciences, with what we should now call laws of thought and categories. Metaphysics has two functions: to discover the eternal and immutable forms of bodies and to discuss purposes, ends, or final causes. Final causes have no place in physics; Democritus never wasted any time on them, hence, Bacon declares, he penetrates farther into nature than Plato and Aristotle, who were ever inculcating them. The doctrine of final causes has no practical value, but is a barren thing, or as a virgin consecrated to God. Mathematics is a branch of metaphysics,—being a science of quantity, which is one of the essential, most abstract, and separable forms of matter. Mathematics and logic both ought to be handmaids of physics, but instead they have come to domineer over physics. Mathematics is of great importance to metaphysics, mechanics, and magic.

The philosophy of man comprises human and civil, or political, philosophy.

Philosophy of Man

In the former we consider man separate, in the latter joined in society. Human philosophy studies body and soul, and their connection. Among its topics are the miseries and the prerogatives or excellencies of the human race, physiognomy and the interpretation of natural dreams, the effect of bodily states on mind (madness, insanity) and the influence of mind on body, the proper seat and habitation of each faculty of the mind in the

body and its organs, also "medicine, cosmetic, athletic, and voluptuary."

The human soul has a divine or rational part and an irrational part. All problems relating to the former must be handed over to religion. The sensitive or produced soul is corporeal, attenuated by heat and rendered invisible, and resides chiefly in the head (in perfect animals), running along the nerves and refreshed and repaired by the spirituous blood of the arteries. The faculties of the soul are understanding, reason, imagination, memory, appetite, will, and all those with which logic and ethics are concerned. The origins of these faculties must be physically treated. The questions of voluntary motion and sensibility are interesting. How can so minute and subtle a breath as the (material) soul put in motion bodies so gross and hard? What is the difference between perception and sense? Bacon finds a manifest power of perception in most bodies, and a kind of appetite to choose what is agreeable, and to avoid what is disagreeable to them (the loadstone attracts iron, one drop of water runs into another). A body feels the impulse of another body, perceives the removal of any body that withheld it; perception is diffused through all nature. But how far, he inquires, can perception be caused without sense (consciousness)? We see how hard it was for the new thinker to get the old medieval notions of an animated nature out of his bones.

Logic treats of the understanding and reason; and ethics, of the will, appetite, and affections; the one produces resolutions, the other actions. The logical arts are inquiry or invention, examination or judgment, custody or memory, elocution or delivery. The study of induction belongs to the art of judgment. Ethics describes the nature of the good and prescribes rules for conforming to it. Man is prompted by selfish and social impulses (as later writers called them). Individual or self good, self-preservation and defense, differs entirely from the social good, though they may sometimes coincide. The social good is called duty. It is the business of the science of government to discover the fountains of justice and public good.

Philosophy, in the broad sense, is the apex of the pyramid of knowledge. It is founded on the just, pure, and strict inquiry of

all the subjects of study already proposed by Bacon. His purpose was not to offer a universal system, but "to lay more firmly the foundations and extend more widely the limits of the power and greatness of man." It did not appear to him that the time had come for attempting a theory of the universe; indeed, he seemed to be doubtful of the possibility of reaching such knowledge at all.

Metaphysics and Theology

Theology he divides into natural and inspired or revealed. Natural theology is that knowledge, or rather rudiment of knowledge, concerning God, which may be obtained by the light of nature and the contemplation of his creatures. The bounds of this knowledge, truly drawn, are that it suffices to refute and convince atheism, and to give information as to the law of nature, but not to establish religion. "It is an assumed truth and conclusion of experience that a little or superficial knowledge of philosophy may incline the mind of man to atheism; but a farther proceeding therein doth bring the mind back again to religion." Yet, such a study does not yield a perfect knowledge of God; nor can we adapt the heavenly mysteries to our reason. Knowledge derived from the senses, as all science is derived, cannot help us here: "the senses are like the sun, which displays the face of the earth, but shuts up that of the heavens." Here we must appeal to sacred or inspired theology, "quit the small vessel of human reason and put ourselves on board the ship of the church, which alone possesses the divine needle for justly shaping the course. The stars of philosophy will be of no further service to us. As we are obliged to obey the divine law, though our will murmur against it, so we are obliged to believe in the word of God, though our reason is shocked at it. The more absurd and incredible any divine mystery is, the greater honor we do God in believing it. After all, it is more worthy to believe than to know as we now know. For in knowledge the human mind is acted on by sense, which results from material things, but in faith the spirit is affected by spirit, which is the more worthy agent. Hence, sacred theology must be drawn from the word and oracles of God, not from the dictates of reason." This applies not only to the great mysteries of the Godhead, but also to the true interpretation of the moral law, a large part of which is too sublime to be attained by

the light of nature. Bacon, therefore, repudiates the attempt of the schoolmen to deduce the truth of the Christian religion from the principles of the philosophers; the union between science and faith is not a legitimate one. But after the articles and principles of religion have been postulated, we can derive and deduce inferences from them. If we accept the premises, we must accept the conclusions. " Thus in chess or other games of like nature, the first rules and laws of the play are merely positive postulates, which ought to be entirely received, not disputed: but the skilful playing of the game is a matter of art and reason."

The cleavage which Bacon makes between theology and philosophy is the inheritance of the closing Middle Ages; by relegating the dogmas to a separate territory, the field was left free for philosophy. His attitude toward theology is really one of indifference. It may surprise us that he devotes so much attention to such subjects as astrology, dreams, divination, etc., but these things were widely believed in his day, and a scientific treatment of them was not out of place at that time.

Bacon as an Empiricist

Although Bacon's empiricism is not thoroughly and consistently worked out, we may class him among the members of that school. All our knowledge, except revelation, is derived by him from sensation; and only particulars exist. Mind or reason acts on the materials furnished by the senses; knowledge is rational and experimental, but reason has no truths of its own. At the same time, mental faculties are spoken of as though they were *a priori* endowments. The soul is material, and yet there is a rational soul, about which, however, we know nothing, and which belongs to religion. Teleology is banished from physics and becomes a part of a barren part of metaphysics.

44. Thomas Hobbes

One of the boldest and most consistent of the representatives of the modern movement is Thomas Hobbes. Like all the reformers, he breaks with the past: Greek philosophy is to him a " phantasm "; the weeding out of inveterate opinions is the business to be taken in hand. With Bacon he accentuates the

practical utility of science or philosophy: the end of knowledge is power. He denies completely the scientific character of theology: there can be no *science* of God, no doctrine of angels. He also repudiates the spiritualistic notion of the soul, which is a fundamental thought with his contemporary Descartes and which Bacon had introduced into his physiological psychology as a kind of appendage. He accepts, instead, the new natural science of Copernicus, Galileo, and Harvey, whom he regards as the founders of science, and fearlessly deduces the consequences of the mechanical theory in his materialistic philosophy. Himself a student of mathematics, Hobbes looks upon the method of geometry as the only one capable of giving us sure and universal knowledge; hence, natural and political *history* are not sciences: such knowledge is but experience, not ratiocination. His rationalistic ideal of knowledge agrees with that of Galileo and Descartes, but he is, like Bacon, an empiricist in his theory of the origin of knowledge. He finds it difficult, however, to reconcile his rationalism with his empiricism; the presence of both factors in the system is responsible for many inconsistencies and uncertainties. As his own chief contribution to thought, he himself regards his theory of the State; civil philosophy, he proudly tells us, is no older than his book *De cive.*

Aim and Method

Thomas Hobbes (1588-1679) studied scholasticism and the Aristotelian philosophy at Oxford, traveled extensively on the Continent as the tutor and companion of young English noblemen, and became acquainted, in Paris, with Descartes, Gassendi, and Mersenne. He emigrated to Holland with English royalists after the revolution in 1648, returning with the Restoration of the Stuarts in 1660.

Among his works are: *Elementa philosophica de cive,* 1642; *De corpore,* 1655; *De homine,* 1658; *Leviathan* (or the matter, form, and power of a commonwealth, ecclesiastical and civil), 1651; *Elements of Law, Natural and Politic* (consisting of *Human Nature* and the *Body Politic;* written 1640), ed. by Tönnies, 1888; and the two treatises on *Liberty and Necessity,* 1646 and 1654.

Works edited by Molesworth, 1839-45, five Latin and eleven English volumes. *Elements of Law, Behemoth, Letters,* ed. by Tönnies, 1888, 1889; Tönnies, *Hobbes-Analekten,* 1904, ff. Selections from writings by Woodbridge, Sneath, Rand, Selby-Bigge. Monographs on Hobbes by G. C. Robertson, L. Stephen, Tönnies, Köhler, Lyon, Brandt.

Philosophy, according to Hobbes, is a knowledge of effects from their causes and of causes from their effects; its method is,

therefore, partly synthetic, partly analytic. That is, we may proceed from sense-perception or experience to principles (analysis) or from primary or most universal propositions, or principles which are manifest in themselves, to conclusions (synthesis). In order to be genuine science or true demonstration, reasoning must take its beginning from true principles, mere experience not being Science. Nominalist that he is, Hobbes also defines reasoning as a kind of calculation: reason is nothing but reckoning, that is, adding and subtracting of the consequences of general names agreed upon, for the marking and signifying of our thoughts.

Theory of Knowledge

The problem, therefore, is to find a first principle, a starting-point for our reasoning, a cause on which to ground all effects. This Hobbes finds in motion. Every body the causes and effects of which we can know, is subject-matter for philosophy. There are natural bodies and artificial bodies, or the commonwealth, a body made by man. Hence, we have natural philosophy (physics and psychology) and political philosophy, which is made up of ethics and politics proper. Primary or first philosophy is a science of the fundamental principles or definitions of all Science; it is a kind of prelude to the other branches, treating of space, time, body, cause, effect, identity and difference, relation, quantity, and the like. By analyzing particular things we ultimately reach their most universal properties and at once know their causes, since these are manifest of themselves, all having but one universal cause, motion. The last things cannot be demonstrated till the first are fully understood. Hence, philosophy is the science of the motions and actions of natural and political bodies, and everything can be explained by motion, or mechanically: the nature of man, the mental world, and the State, as well as the occurrences of physical nature.

Whence do these principles arise, how does our knowledge originate? The original of all our thoughts is sense. Sensations persist or are retained in memory (a "decaying sense"). The memory of many things is experience. Images or thoughts succeed one another in the mind, and we have a train of thoughts, which can be regulated by desire and design. The purpose of speech is to transfer our mental discourse into trains of words, which helps us to register our thoughts as well as to communicate

them to others. In the right definition of names lies the first use of speech, which is the acquisition of Science. In Science we use universal terms, but the things themselves are not universal, there is nothing called man in general (nominalism). Hence, neither knowledge of fact nor knowledge of consequence is absolute, but conditional.

Whereas Bacon emphasizes the part played by experience or induction, Hobbes shows the need of demonstration or the deductive method. But holding, as he does, that the principles from which we reason have their source in sense, he loses his firm faith in the possibility of any method to reach absolute knowledge. Locke later on strengthens these doubts by declaring that we can have no science of bodies at all.

Knowledge, then, has its origin in sense-impressions. Now, what is sensation and how is it caused? We get through our sense-organs different sensations: color, sound, taste, smell, touch. These processes are caused by the action of some external object on the organs of sense. Motion is produced in the organ and carried over nerves into the brain and thence into the heart. There a reaction ensues (an endeavor outward) which makes it appear that there is some outward object. The sensations, then, are nothing but motions in the brain, or spirits, or some internal substance of the head. The sensation or image or color is but an appearance, an apparition unto us of the motion, agitation, or alteration which the object worketh in the brain. Sensations are not qualities of things themselves; they are but motions in us. Now, since only motion can produce motion, there can be nothing outside except motion. All sense is fancy, but the cause is a real body. There is no similarity between the cause of the sensation and the sensation or appearance. The reality outside is a moving reality; we perceive it as color or sound. Our picture of the world obtained through sense is not the real world.

If this is true, how do we know what is the nature of the world? Hobbes does not answer; the problem did not disturb him; he dogmatically assumes with the scientists of his day that the world is a corporeal world in motion. As we shall see later, Descartes attempted to prove the existence of an extended moving reality deductively, from the self-certainty of conscious-

ness, but the English empiricist was not troubled by skeptical doubts with respect to things-in-themselves.

A real world of bodies in space exists; there is real space besides imaginary space, or the idea of space produced by the object; the real magnitude of a body causes the idea or phantasm of space in the mind; in this sense imagined space is an accident of the mind. No body can be conceived without the accident of extension and figure; all other accidents,—rest, motion, color, hardness, and the like,—continually perish and are succeeded by others, yet so that the body never perishes. Motion is defined as a continuous relinquishing of one place and acquiring another. Motion can have no other cause than motion. When one motion produces another, that does not mean one accident goes out of one object into another, it means that one accident perishes and another is generated. A body is said to act or work on, that is to say, *do* something to, another body, when it either generates or destroys some accident in it. This is the relation of cause and effect. The efficient cause of all change and motion is motion. Power is not a certain accident that differs from all acts, it is called power because another act shall be caused by it afterward. The question of the beginning of motion cannot be answered by philosophers, but by "those that are lawfully authorized to order the worship of God." At the creation, God gave to all things what natural and special motion he thought good.

Metaphysics

There are not, as the schoolmen held, any incorporeal substances or spirits in addition to bodies. Substance and body are the same thing, hence to speak of incorporeal substances is to speak of incorporeal bodies, which is a contradiction in terms or an absurdity of speech. Besides, if there were spirits or souls, we could not know them, for all our knowledge is based on sensation, and spirits are not supposed to work on sense. The Bible does not teach that there is an incorporeal or immaterial soul. Indeed, it rather favors those most who hold angels and spirits to be corporeal. God himself, Hobbes is inclined to think, is body or a corporeal being. That there is a God we know and can prove in the causal way, but *what* he is we do not know.

Hobbes offers various conceptions of the mind. Mind is

motion in the brain, or it is an internal substance in the head, a subtle body. Images or ideas are motions in the brain and heart, motions of a material substance. This is thoroughgoing materialism. But when he speaks of mental processes as *appearances* or apparitions of motions, as accidents of the mind, but "not like motions," he modifies his materialism: states of consciousness here are no longer motions, but the effects of motions. Such a view is called by modern writers *epiphenomenalism:* consciousness is an after-appearance.

Psychology

Besides the faculty or power of knowing, there is a motive power, the power by which the mind gives animal motion to its body. Motion proceeds from the head to the heart; when it helps the vital motion there, it is delight or pleasure, when it hinders it, it is pain. Pleasure and pain arouse *appetite,* or *desire,* and *aversion:* appetite is an endeavor toward, aversion an endeavor fromward something. Some appetites and aversions are born with us (appetite for food), the rest proceed from experience.

What pleases a man he calls good, what displeases him, evil. Men differ in constitution and, therefore, concerning the common distinction of good and evil. There is no such thing as absolute goodness, it is always relative; even God's goodness is goodness to us. All delight or pleasure is appetite, hence there can be no contentment but in proceeding or progress. Felicity or continued happiness consists not in having prospered, but in prospering.

The imagination is the first beginning of all voluntary motion. The alternate succession of appetite and aversion is called deliberation; in deliberation the last appetite or the last aversion is called *will:* will to do and will not to do, or to omit. All other appetites to do and to quit are called intentions and inclinations, but not wills. Will in man is not different from will in other animals. The causes of our appetites and aversions are, therefore, also the causes of our will. Our will is the effect of sense, memory, understanding, reason, and opinion. The will, and each inclination during deliberation, is as much necessitated and dependent on a sufficient cause as any event whatever. The will is not free but caused; to call an agent free means he has made an end of deliberating. A free agent is one who can

do if he will, and forbear if he will; liberty is the absence of external impediments. A man is free to act, but not free to will as he wills, he cannot will to will. To say I can will if I will, is absurd.

Now that we know the nature of man, we are ready to understand the meaning of the State and law. We may study civil and moral philosophy synthetically, that is, begin with principles, say, the knowledge of human motives (motions of the mind), and deduce from them the necessity of establishing a commonwealth and rights and duties. We can, however, also reach the principles analytically, by induction, or by observing the motives in oneself. It is right and reasonable for a man to use all means and do whatever is necessary for the preservation of his body. He, therefore, has *by nature* the right to all things, to do whatever he pleases to whom he pleases, to possess, use, and enjoy all things he can. Nature has given all things to all men, hence right and profit (*jus* and *utile*) are the same thing. But in a state of nature, where every man is striving for such power, where it is right for every man to invade another man's right and to resist invasion of his own, there will be a state of perpetual war of all against all (*bellum omnium contra omnes*). In such a state of war nothing can be unjust; the notions of right and wrong, justice and injustice have there no place. Where there is no common power, there is no law; where no law, no injustice. Force and fraud are in war the cardinal virtues; justice and injustice are qualities that relate to men in society, not in solitude. Aristotle had taught that man is a social animal, that the social instinct leads him to form societies. This Hobbes denies: man is a ferocious animal: *homo homini lupus;* competition of riches, honor, command, or other power, inclines to contention, enmity, and war, because the way of one competitor to the attaining of his desire is to kill, subdue, supplant, or repel the other. In such a state of hostility and war, no man can hope for sufficient might to preserve himself for any time. Consequently, his desire for power defeats itself, it creates a state in which the very end he aims at is thwarted. And so, injustice and injury is something like an absurdity: voluntarily to undo that which from the beginning he has voluntarily

Politics

done. Nevertheless, although injustice is illogical or irrational, Hobbes is not optimistic enough to believe that man is ruled by reason; it is the fear of consequences that makes him keep his word.

Hence, reason dictates that there should be a state of peace and that every man should seek after peace. The first precept of reason, or *law* of nature, commands self-preservation; the second, that he lay down his *natural* right and be content with as much liberty against other men as he would allow other men against himself, if he thinks it necessary for peace and defense. When he has laid it down, it is his *duty* not to make void that voluntary act of his own. A man, however, transfers his right in consideration of some right reciprocally transferred to himself, or for some other good. Consequently, no man can be understood to transfer some rights, *e.g.*, the right of self-defense. He transfers his right for the very purpose of securing his life. The mutual transferring of right is *contract*. Hence, the third law of nature is that men perform the covenants made. In this consists the fountain and original of justice, for where no covenant has preceded, no right has been transferred, and no action is unjust. But where there is fear on either part that the covenants be not performed, the covenants are invalid, and there can be no injustice. It follows that before just and unjust can have any meaning, there must be some coercive power to compel men equally to the performance of their covenants, to compel men to perform them by the terror of some punishment. Such power there is none before the erection of a commonwealth; hence, where there is no commonwealth there is nothing unjust. There are other laws, but they can all be subsumed under the formula: Do not that to another which thou wouldest not have done to thyself.

The laws of nature are immutable and eternal; injustice, ingratitude, arrogance, pride, iniquity, acception of persons, and the rest can never be made lawful. For it can never be that war shall preserve life and peace destroy it. The science of these laws is the true and only moral philosophy. For moral philosophy is nothing else but the science of what is good and evil, in the conversation and society of mankind. These laws are called *laws of nature* because they are dictates of reason, they

are called *moral* laws because they concern men's manners, one towards another; they are also *divine* laws in respect of the author thereof.

The only way to erect a commonwealth and have peace is to confer all the power and strength of men upon one man or assembly of men, that they may reduce all their wills, by a majority vote, into one will. This is more than consent or concord, it is a real unity of them all, in one and the same person, made by covenant, every man with every man. The multitude so united in one person is called a commonwealth; it is the great leviathan, the mortal god. He that carries that person is the sovereign and has sovereign power.

The subjects cannot change the form of government, the sovereign power cannot be forfeited; no one can protest against the institution of the common sovereign, declared by the majority. He has the whole right of making rules (legislature), the right of judicature, the right of making war and peace, choosing counselors and ministers, rewarding and punishing, as well as the right of deciding the doctrines fit to be taught his subjects. These rights are incommunicable and inseparable. Other rights the sovereign may confer, *e.g.*, the power to coin money. The evils that may follow from such absolute sovereignty are not to be compared with the miseries and horrible calamities of civil war, the dissolute condition of masterless men.

The sovereign power may reside in one man or in an assembly of men (monarchy, aristocracy, democracy). The monarchy is the best form: in the king the public and private interest are most closely united, and he can act more consistently than a body of men. But the sovereign power ought always to be absolute, however placed. Some things, however, the subject may refuse to do: every subject has liberty in all things the right of which cannot be transferred by contract; he is not bound to injure or kill himself, confess his crime, kill any other man, etc. Among such rights Hobbes does not include the right of religious liberty: the religion of the subjects is determined by the State and is obligatory upon subjects. God speaks in these days by his vice-gods or lieutenants here on earth, by sovereign kings or such as have sovereign authority as well as they. The appeal to the private conscience causes trouble, we need a common tribunal

to decide how to act if we are to have peace. Hobbes's theory of the State may be regarded as a philosophical defense of the English monarchy of the Stuarts against the demands of the people. The sovereign can do no injury, for he is my representative. I have given him authority. He may commit iniquity, but not injustice or injury in the proper meaning of the term. The obligation of subjects lasts as long and no longer than the power lasts by which he is able to protect them. The duty of the sovereign consists in the good government of the people; when his acts tend to the hurt of the people in general, they are breaches of the law of nature or of the divine law (*salus populi suprema lex*).

CONTINENTAL RATIONALISM

45. René Descartes

The Problem

Descartes, like Bacon, resolutely sets his face against the old authorities and, like him, emphasizes the practical character of all philosophy. "Philosophy is a perfect knowledge of all that man can know, as well for the conduct of his life as for the preservation of his health and the discovery of all the arts." Unlike the English empiricist, however, he takes mathematics as the model of his philosophical method: study logic, he tells us, and practise its rules by studying mathematics. He offers not merely a program of human knowledge, but seeks to construct a system of thought that may possess the certainty of mathematics. In his conception of external nature, he is in agreement with the great natural scientists of the new era: everything in nature,—even physiological processes and emotions,—must be explained mechanically, without the aid of forms or essences. At the same time, he accepts the fundamental principles of the time-honored idealistic or spiritualistic philosophy and attempts to adapt them to the demands of the new science: his problem is to reconcile mechanism and the notions of God, soul, and freedom.

René Descartes (1596-1650) was born at La Haye, Touraine, the son of a noble family, and educated by the Jesuits of La Flèche,

learning ancient languages, scholastic philosophy, and mathematics. In this latter study alone he found the certainty and clearness he craved; the others did not satisfy him, and he abandoned them, upon leaving school (1612), to seek only after such science "as he might discover in himself or in the great book of the world." He traveled, followed the diversions of high life, entered the armies of Maurice of Nassau (1617) and General Tilly (1619), and mingled with all sorts and conditions of men. During this entire period his intellectual interests never flagged; indeed, we freqently find him in meditative retirement, even at the headquarters of the army. The problem that stirred him was how to reach such certainty in philosophy as characterizes mathematics; and he prayed for divine illumination, vowing a pilgrimage to the shrine of Loretto in case his prayer should be answered. Leaving the army in 1621, Descartes devoted himself to travel and study (1621-1625), and spent three years in Paris with scientific friends (1625-1628); but feeling the need of solitude, he withdrew to Holland, where he busied himself with the preparation of his works (1629-1649). In 1649 he accepted the invitation of Queen Christina of Sweden, who was deeply interested in philosophy, and journeyed to Stockholm; the climate, however, undermined his health, and he died after a year's sojourn (1650).

Among Descartes's works are the *Discours de la méthode* (which appeared with *Dioptrics, Meteors,* and *Geometry* in a series of *Philosophical Essays*), 1637; *Meditationes de prima philosophia* (to which were added objections by several learned men, Arnauld, Hobbes, Gassendi, Mersenne, and others, together with the author's rejoinders), 1641; *Principia philosophiæ,* 1644; *Les passions de l'âme,* 1650. The *Discourse* and *Passions* were written in French, the *Meditations* and *Principles* in Latin. The book *Le monde ou traité de la lumière,* begun in 1630, was not published by Descartes; the condemnation of Galileo by the Inquisition in 1632 deterred the timid and peace-loving philosopher from completing it. It and the *Traité de l'homme* appeared in 1664; the *Letters,* 1657-1667; posthumous works, 1701.

Works ed. by Cousin, in French, 11 vols., 1824-26; some unpublished writings by Foucher de Careil, 2 vols., 1859-60; Adam and Tannery, 10 vols., 1897, ff.; French ed. of collected works, 1907, ff. Transl. of *Method, Meditations,* and selections from *Principles* by Veitch (used by us), and by Torrey; transl. of works by E. S. Haldane and G. Ross.

K. Fischer, *Descartes and his School,* transl.; monographs by Mahaffy, Jungmann, Hoffmann, Liard, Fouillée; N. Smith, *Studies in Cartesian Philosophy;* Boutroux, *Descartes and Cartesianism,* in *Cambridge Modern History,* vol. IV, chap. xxvii; *Rev. de mét. et morale,* July 1896, Descartes-number; Natorp, *Descartes' Erkenntnistheorie;* Koch, *Psychologie Descartes';* Heinze, *Sittenlehre des Descartes;* Touchard, *La morale de Descartes.*

Lévy-Bruhl, *History of Modern Philosophy in France;* Damiron, *Histoire de la philosophie du XVII. siècle;* Bouillier, *Histoire de la philosophie cartésienne;* Monchamp, *Histoire du Cartésianisme en Belgique;* Iverach, *Descartes, Spinoza, and the New Philosophy;* Schaarschmidt, *Descartes und Spinoza.*

The first part of true philosophy, according to Descartes, is metaphysics, which contains the principles of knowledge, such as the definition of the principal attributes of God, the immateriality of the soul, and of all the clear and simple notions that are in us. The second is physics, in which, after finding the true principles of material things, we examine, in general, how the whole universe has been framed; then, in particular, the nature of the earth and of all the bodies most generally found upon it, as air, water, fire, the loadstone and other minerals; next the nature of plants, animals, and, above all, man, in order hereafter to be able to discover the other sciences that are useful to us. Thus, all philosophy is like a tree, of which *metaphysics* is the root, *physics* the trunk, and all the other sciences the branches that grow out of this trunk, which are reduced to three principal, namely, *medicine, mechanics,* and *ethics.* The science of morals is the highest and most perfect, which, presupposing an entire knowledge of the other sciences, is the last degree of wisdom.* The first part of Descartes's book on the *Principles of Philosophy* contains the metaphysics, the other three parts take up "all that is most general in physics."

Classification of the Sciences

Descartes's aim is to find a body of certain and self-evident truths, such as every one endowed with common-sense and the faculty of reasoning will accept. Such knowledge the philosophy of the School has not been able to afford; there are many different opinions on one and the same subject, and we look in vain for certainty in this field. The other sciences, taking, as they do, their principles from scholastic philosophy, can have nothing solid built upon such unstable foundations. Instead of clear and certain knowledge, we receive a lot of false opinions and are involved in error and doubt. There is not a single subject in philosophy that is not still in dispute. Hence, if we would have anything firm and constant in the sciences, we

Method and Criterion of Knowledge

* With the Greek thinkers of the classical period and many of the great philosophers who came after him, Descartes emphasizes the practical, ethical significance of philosophy: "The study of philosophy is more imperatively requisite for the regulation of our manners and for conducting us through life than is the use of our eyes for directing our steps."

must get rid of these opinions and build anew from the bottom up.

Instead of accepting the traditional views, we ought to study the great book of the world. "We shall never become philosophers even though we should read all the reasonings of Plato and Aristotle if we cannot form a sound judgment upon any proposition." To know the opinions of others is not science, but history; a man should do his own thinking. But how shall we proceed in our attempts to reach clear and certain knowledge, what *method* ought we to follow? The example of mathematics gives us a hint of the order to be pursued in our reasonings; the mathematicians alone have been able to find certain and self-evident propositions. We accept without debate the statement that twice two is four, or that the sum of the angles of a triangle is equal to two right angles. If we could discover such truths in philosophy, there would be an end of countless disputes and controversies: we should be able to prove the existence of God, the immortality of the soul, the reality of an external world, and we should succeed in laying secure foundations for the sciences.

How do we proceed in mathematics, what is the method pursued? We begin with axioms, or principles which are self-evident, which every one accepts who hears and understands them. From these principles as our starting-point we deduce other propositions which logically follow from them, and which are just as certain as the former, provided no mistake has been made in the reasoning. That is, we begin with simple propositions that are self-evident, and pass from these to more complex ones; our method is synthetic or deductive.

This method must be applied in philosophy. We should proceed from absolutely certain first principles, from propositions which are clear and self-evident, and pass on to new and unknown truths which are equally certain. We look in vain for such truth in the traditional scholastic systems, for in them we receive nothing but a mass of divergent opinions. Besides, we cannot accept any truth on the authority of others; we must search after it ourselves, never receive anything as true which we do not clearly and distinctly perceive to be so. And here we should be on our guard. We have our prejudices, a lot of

transmitted notions which have been impressed upon us in our childhood by our parents and teachers. Many of these opinions have been found by experience to be false; perhaps all of them are. Neither can we have faith in our sensations, for these often deceive us, and how do we know that they have anything real corresponding to them? But are not our own bodies and actions realities? No, we cannot be certain even of these; we are often deceived, we dream, and in our dreams we believe we have realities before us, whereas they are nothing but illusions. Perhaps we are dreaming now, at this present moment; we have no marks by which we can with certainty distinguish between waking and dreaming. For all I know, an evil spirit has made me so that this world which I picture to myself, exists only in my imagination; perhaps it has no existence outside my mind. Even the demonstrations of mathematics may be doubted, for we have sometimes seen men fall into error in such matters and admit as absolutely certain what to us appeared false. Besides, God, who is all-powerful, may have created us so that we are always deceived even in the things we think we know best.

There is, then, no idea which seems certain to me. "I suppose, accordingly, that all the things which I see are false; I am persuaded that none of those things which my deceptive memory presents to me are true; I suppose that I have no senses; I believe that body, figure, extension, motion, and place are nothing but fictions of my mind. What is there then that can be thought true? Perhaps only that nothing in the world is certain."

But one thing is certain, and that is that I doubt, or think; of that there can be no doubt. And it is a contradiction to conceive that that which thinks does not exist at the very time when it thinks. Descartes does not here infer from an empirical psychical fact: I think, hence I am; but reasons logically that doubt implies a doubter, thinking a thinker, a thinking thing (*res cogitans*) or spiritual substance; thus reaching what seems to him a rational, self-evident proposition. To doubt means to think, to think means to be; *cogito, ergo sum,* I think, therefore I am. "It is the first and most certain knowledge that occurs to one who philosophizes in an orderly manner." Here is the principle we have been seeking,—a certain, self-evident starting-point for our metaphysics. This proposition also furnishes us

with a criterion or test of truth. It is absolutely certain, it is true, it is clearly and distinctly perceived. Hence, I can establish it as a general rule that all things which are clearly and distinctly perceived are true.

We now have a fundamental principle and a criterion of knowledge. What else can we know? It is doubtful whether anything can be certain, so long as we are confronted with the notion of a deceiving God; we do not know as yet whether there is a God, and that he is not a deceiver. This difficulty must be removed. Some of our ideas appear to be innate, some are our own inventions, most of them seem to be received from without. Certain ones we regard as effects or copies of an external world. But all this may be illusion. One of the ideas I find in myself is the idea of God. Now, nothing can come from nothing, whatever exists must have a cause for existing; this, too, is a self-evident proposition. Moreover, the cause must be at least as great as the effect, there must be at least as much reality in it as in the effect. That which contains greater reality in itself, the more perfect, cannot be a consequence of, and dependent on, the less perfect. Hence, I myself cannot be the cause of the idea of God, for I am a finite, imperfect being, and the idea is the idea of a perfect, infinite being. Hence, the idea must have been placed in me by an infinite being, or God, and God must exist. This proof for the existence of God is not the ontological proof of Anselm, but a causal proof, based on our notion of a perfect being. It is not argued that such a being exists because we have a concept of him, but that the knowledge of such a being necessarily implies, as the ground of this concept, a being greater than the knower.

Proofs for the Existence of God

But, it may be urged, the notion of infinity is a mere negative concept: the denial of perfection. It cannot be that, according to Descartes, for the idea of finitude implies the idea of infinity, or of God; how could I doubt or have desires if I did not have in myself the idea of a being more perfect than myself, by comparison with whom I recognize the defects of my nature? Doubt implies a standard of truth, imperfection a standard of perfection.

Again, I could not have been the cause of my own existence,

for I have an idea of perfection; and if I had created myself, I should have made myself perfect, and, moreover, I should be able to preserve myself, which is not the case. If my parents had created me, they could also preserve me, which is impossible. Finally, it also follows from the very notion of God as a perfect being that he exists. It is not in my power to conceive a God without existence, that is, a being supremely perfect and yet devoid of an absolute perfection. This is the ontological argument used by both Anselm and Augustine.

It is also unthinkable that the divine perfections, which I conceive, should have more than one cause, for if these causes were many, they would not be perfect; to be perfect there must be one cause only, one God. God must be self-caused, for if he is the effect of another being, then that being is the effect of another, and so on *ad infinitum:* we have an infinite regress and never reach any effect.

The idea of God I have received from God; it is innate. God is not only the cause, but the archetype of our existence, he has created man in his own image. It ought not to be wondered at that God in creating me should have placed this idea in me, to serve as the mark of the workman imprinted on his work. If God did not exist, I could not possibly be what I am, nor could I have an idea of God. We know more of God himself and of the human mind than we know of corporeal objects. Reflecting upon the idea of God, we perceive that he is eternal, omniscient, omnipotent, the source of all goodness and truth; the creator of all things. He is not corporeal and does not perceive by means of the senses, as we do. He has intellect and will, but not like ours; and he does not will evil or sin, for sin is the negation of being. This is the usual theistic position with which we have become acquainted in scholasticism. Descartes agrees with Duns Scotus that we can accept reason only in so far as it does not conflict with revelation. He also holds with Duns that God could have arranged the world otherwise than it is; likewise that a thing is good because God makes it so; he does not make it so because it is good.

We have thus far discovered several self-evident truths: I exist; Whatever is clearly and distinctly perceived is true; Nothing can be without a cause; The cause must contain at least as

much reality and perfection as the effect; God exists; God is perfect, God cannot deceive us. But how comes it, then, that we are ever deceived, that we ever err at all? In the first place, the power of distinguishing the true from the false, which God has given us, is not infinite. Moreover, error depends on the concurrence of two causes, namely, the faculty of cognition and the faculty of election, or the power of free choice, *i.e.*, understanding and will. By understanding alone, I neither affirm nor deny anything, but merely apprehend the ideas regarding which I may form a judgment; no error, properly so-called, is found in it. Neither is the will of itself the source of error, for it is exceedingly ample and perfect in its kind. Errors are due to my failure to restrain the will from judging a thing when I do not conceive it with sufficient clearness and distinctness; by choosing the false instead of the true and evil instead of good, the will falls into error and sin.

Truth and Error

Another problem demanding consideration is that of the external world. We imagine that there are bodies outside of us. How can we know that they actually exist? We have feelings of pleasure and pain, appetites, and sensations, which we refer instinctively to bodily causes. But since they often deceive us, we cannot prove the existence of bodies from the existence of such experiences. Yet, as we do not produce these states ourselves, they must be produced either by God or by the things outside. If they are produced by God, we are deceived,—for we are not aware that he is their cause,—and God is a deceiver. God, however, is not a deceiver, as has been shown, but a truthful being, and our sensations must, therefore, be caused by real bodies.

External World

What, however, are bodies? Bodies exist independently of our thinking; they do not need our existence in order to exist. Such an independent thing is called a *substance.* By substance we can mean nothing else than a thing which so exists that it needs no other thing in order to exist. In reality, there is only one such being, God, substance in the absolute sense. We, therefore, have, strictly speaking, one absolute substance, God, and two relative substances, mind and body. These two exist independently of one another, but both depend on God. They are fundamentally

different from one another, and we know them only through their attributes. The essential characteristic or property of substance, that which necessarily inheres in it, is called the *attribute*. The attribute is the quality without which the substance cannot be thought or exist. But the attribute can manifest itself in different ways or *modes* or modifications. Substance and attribute can be conceived without modes, but modes cannot be thought without substance and attribute. We cannot conceive figure without extension, nor motion except in extended space; nor imagination, sensation, or will, except in a thinking thing. We can, on the other hand, conceive extension without figure or motion, and thought without imagination or sensation. The substance cannot change its attributes, but it can change its modes: a body will always be extended, but its figure need not be the same. Since there are no changes in God, there are no modes in God.

What, then, are things as such? What we clearly and distinctly perceive in body is the essential attribute of body. Sounds, colors, taste, smell, heat and cold are not attributes of body: we are unable to conceive these clearly and distinctly, they are confused; what I sense is not the body's true reality. The attribute of body is extension, and nothing else; body and extension are identical. Extension is length, breadth, and thickness, hence extension and space are identical. Every body is a limited spatial magnitude. There is, therefore, no empty space or vacuum: wherever there is space, there is body. Space is infinitely divisible, there are no ultimate parts of space, hence no *atoms*. The smallest parts of bodies are still further divisible; they are not atoms, but *corpuscles*, or molecules, as we should say to-day. Nor can extension stop anywhere: the corporeal world is infinite.

All the processes of the external world are modifications or modes of extension; extension may be divided without end, the parts may be united and separated, whence arise different forms of matter. All variation of matter, or diversity of form, depends on motion. Motion is the action by which a body passes from one place to another. It is a mode of the movable thing, not a substance. All occurrence is transference of motion from one part of space to another. "Motion is the transporting of one

part of matter or of one body from the vicinity of those bodies that are in immediate contact with it, or which we regard at rest, to the vicinity of other bodies." The physical world is explained in terms of mechanics. There is no action in the distance, all occurrences are due to pressure and impact. Hence, there must be a universal ether to account for the facts of astronomy.

Body conceived as mere extension is passive and cannot move itself; we must, therefore, have recourse to God as the first cause of motion in the world. "God originally created matter along with motion and rest, and now by his concourse alone preserves in the whole the same amount of motion that he then placed in it." This view of the prime mover was common in the time of Descartes and after. Galileo and Newton both accepted it: it is the old Aristotelian conception. To hinder divine interference with the world, however, which would mean the abandonment of the mechanical theory and a relapse into scholasticism, our philosopher holds that God has given the world a certain amount of motion: motion is constant. We have here the theory of the conservation of energy in germ. Bodies cannot produce motion of themselves or stop it; consequently, they can neither increase nor decrease it, and hence the quantity of motion and rest must remain the same.

Since God is immutable, all changes in the world of bodies must follow according to constant rules, or laws of nature. All laws of nature are laws of motion. All differences in bodies are explained as different relations of the parts: solid bodies are bodies in which the parts are united and at rest; fluids are bodies in which the parts move.

Mind is diametrically opposed to body. The attribute of body is extension: bodies are passive; the attribute of mind is thinking: mind is active, free. The two substances are absolutely distinct: mind is absolutely without extension, and no body can think. We cannot conceive of mind or soul without thought: the soul is *res cogitans;* I have a clear and distinct idea of myself in so far as I am only a thinking and unextended thing. Hence, it is certain that I, that is, my mind, through which I am what I am, is entirely and truly distinct from my body, and may exist with-

Mind and Body

out it. I can clearly and distinctly conceive myself as entire, without the faculties of imagining and perceiving, but I cannot conceive these without conceiving *myself,* that is to say, without an intelligent substance in which they reside. Imagination and perception are, therefore, distinct from myself, as modes are from things.* We clearly perceive that neither extension nor figure nor local motion nor anything similar that can be attributed to body, pertains to our nature, and nothing save thought alone. And, consequently, the notion we have of our mind precedes that of any corporeal thing, and is more certain, seeing we still doubt whether there is any body in existence, while we already perceive that we think.

What particularly attracted Descartes in this extreme dualism was that it left nature free for the mechanical explanations of natural science. Mind is eliminated from nature and given an independent territory of its own. Physics is allowed to go its own way; all purposes or final causes are banished from it. A division is made between mind and body similar to the division made between theology and philosophy in scholastic days. This teaching Descartes applies to the entire organic world, even to the human body. The human body is, like the animal body, a machine. The moving principle in it is the heat in the heart; the organs of motion are the muscles; the organs of sensation, the nerves. Animal spirits are distilled in the blood in the heart and rise through the arteries into the brain, and thence into the muscles and nerves. All the functions of the body follow naturally, in this machine, from the arrangement of the organs,—as necessarily as the movements of a watch or other automaton follow from its pendulum and wheels. It is not necessary to conceive in it any plant or sensitive soul or any other principle of vital motion than blood and the animal spirits. Descartes repudiates the vitalism of Aristotle and the schoolmen, and offers a thoroughgoing mechanical theory of organic nature.

If these two substances exclude one another, it would follow that there can be no interaction between them: mind cannot

* In thought, however, Descartes includes will and evidently also such higher emotions as are not the result of the union of body and mind. He tells us in his *Discourse on Method* that a thinking thing is one that doubts, understands, conceives, affirms, denies, wills, refuses, imagines as well as feels.

cause changes in the body, and body cannot cause changes in the mind. Descartes, however, does not draw the consequences of his premises. There are certain facts which point to an intimate union between body and mind in man: appetites of hunger and thirst; emotions and passions of mind which are not exclusively mental affections; sensations of pain, color, light, sound, etc. These we cannot refer to the body alone or to the soul alone, but must explain by the close and intimate union of the two. The union is not to be conceived as one like that of the pilot to the vessel. My mind and my body compose a *substantial* unity. All the sensations just mentioned are merely confused modes of consciousness, the result of this union. That is, man is not a pure spirit. Motion in animals, and often in ourselves, occurs without the intervention of reason; the senses excited by external objects simply react to the animal spirits and the reactions are mechanical,—the animal is nothing but a machine;—but this is not the case with human sensations. If I were merely a thinking being, if my soul were not somehow intimately conjoined with my body, I should, for example, *know* that I am hungry, but not *feel* hungry. I should not have these confused modes of consciousness.

Just how this intimate union is to be conceived, is not made quite clear, however. Descartes warns us against confounding mind and body with one another. Thought and extension, he tells us, can be combined, in man, in unity of composition, but not in unity of nature: the union should not be compared with a *mixture* of two bodies. He teaches that "thought can be troubled by the organs without being the product of them"; sensations, feelings, and appetites are disturbances in the soul resulting from its union with a body. In spite of the union, however, body and soul remain distinct; God has put them together; he cannot rid himself of the power of separating them or of conserving the one apart from the other. Descartes's idea here seems to be that the relation between mind and body is not such that a physical state *becomes* a mental state, produces or *causes* a mental state, or vice versa: the mind is simply *troubled* by organic processes. His obscurity and vacillation on this point are due to his desire to explain the corporeal world on purely mechanical principles and at the same time leave a place for

the action of a spiritual principle. The facts of experience point to an intimate connection between the two worlds which his clear-cut distinction between them seems to render impossible.

At other times, however, he accepts the theory of causal interaction without hesitation. The soul, though united with the whole body, exercises its functions more particularly, or has its principal seat, in the pineal gland of the brain. Movements are caused by sensible objects in the animal spirits and transferred to the pineal gland; in this way sensations are produced. The soul can also move the gland in different ways; this motion is transferred to the animal spirits and conducted by them over the nerves into the muscles. Here the relation of mind and body is clearly conceived as causal: through the mediation of the pineal gland a certain interaction is brought about between them.

The soul, according to Descartes, does not consist of separate souls or faculties, but is a single principle expressing itself in various ways: the same soul that feels also reasons and wills. He distinguishes between its active and passive phases, the actions and passions of the soul, as he calls them. The former are our volitions or acts of will, which depend on the soul itself: I am free to will to love God, or to think pure thought, or to create pictures of the imagination and to move my body. The latter are sensations and their copies, our appetites, pain, heat, and other bodily feelings, which are referred either to external objects or to the body. The voluntary or active states are absolutely in the power of the soul and can only be indirectly changed by the body, whereas the passive states depend absolutely on their physiological causes and can be changed by the soul only indirectly, except in cases in which the soul is itself their cause. There are, however, other states, or "perceptions," "of which we feel the effects as in the soul itself." These are the sentiments of joy, anger, and the like, which are passions in the restricted sense of the term; they are perceptions or sentiments or emotions of the soul which we refer particularly to it and which are caused, supported, and strengthened by certain movements of the animal spirits. The principal effect and use of such passions, however, is to incite and dispose the soul to will the things for which they prepare the body: fear incites the will to fly, courage to fight, and so on.

Emotions

The passions proper have as their immediate cause the movements of the animal spirits which agitate the pineal gland, but they can sometimes be caused by the action of the soul, which wills to conceive such and such an object; thus I may arouse feelings of courage in myself by analyzing the situation.

The so-called conflicts between natural appetites and will are explained as oppositions between movements, which the body by its spirits, and the soul by its will, tend to excite in the pineal gland at the same time. Every one can recognize the strength or weakness of his soul by the outcome of such conflicts. But there is no soul so feeble that it cannot, if well conducted, acquire an absolute power over its passions. The power of the soul, however, is inadequate without the knowledge of truth.

Descartes enumerates six primary passions: wonder, love, hate, desire, joy, and sorrow, of which all the rest are species. They are all related to the body; their natural use being to incite the soul to consent and contribute to the actions which tend to preserve the body or to render it in some way more perfect; and in this sense joy and sorrow are the first to be employed. For the soul is directly turned from harmful things only by the feeling of pain, which produces the passion of sorrow, then follow hatred of the cause of the pain and the desire to be freed from the pain.

Our good and evil depend chiefly on the inner emotions excited in the soul only by the soul itself. So long as the soul has something within to satisfy it, all the troubles which come from without have no power to hurt it. And in order that it may have this inner satisfaction, all that is needed is to follow virtue exactly. We note here the Stoic influence on Descartes's ethics. Stoicism was the current ethical theory in the Renaissance and remained popular far into modern times.

Bacon had suggested a mechanical theory of mental states and Hobbes had made mechanism the basis of his entire world-view. Descartes attempts to apply it in detail to a large portion of our psychic life. But he does not explain all our mental processes in this way. Mind itself is a distinct entity, having the power of understanding and will. Moreover, all the " perceptions," of which Descartes speaks,—sensations, appetites, emotions,—are states of mind, not motions; and some passions are purely men-

tal, not caused by organic activities at all. The will is independent of bodily states and can of its own accord produce such states. The will is free, and the ethical ideal of the soul is to make itself free from external influences, to keep the reins in its own hands.

The aim of Descartes is to reach clear and certain knowledge, such certainty as arises when we judge that it is impossible for a thing to be otherwise than we conceive it. We have such necessary knowledge in the demonstrations of mathematics, and also in philosophy if we follow the proper method. Certain truths are clearly and distinctly perceived, though not equally by all men. Now, such knowledge cannot spring from the senses; they do not tell us what things are in themselves or as such, but only how they affect us. Colors, sounds, taste, odors, do not belong to the object. What the real object is, what it is when stripped of the qualities the senses ascribe to it, we can know only by clear and distinct thinking. If we cannot derive true knowledge from sense-experience, if genuine knowledge is the result of reasoning from certain basal notions and principles, these must be inherent in the mind itself, innate, or *a priori*. The mind has its own standards or norms, which guide it in the pursuit of truth. Principles of knowledge may become explicit only in the course of experience, that is, as the mind exercises itself in thought, but they are somehow present from the beginning. Descartes's basal idea is that reason has its natural norms; *how* they are present, he is not sure; here, again, he vacillates. By innate knowledge he sometimes means ideas or truths impressed upon the mind, principles which the soul finds in itself, and sometimes the native power or faculty of the soul to produce such knowledge in the course of human experience. The polemic of Locke against the doctrine of innate ideas contributed to greater clarity and definiteness with regard to the whole problem, and compelled rationalism in the persons of Leibniz and Kant to present the teaching in a different form.

Innate Ideas

Descartes's rationalism and apriorism did not hinder him from paying ample attention to experience.* He did not work out

* Cf. Duboux, *La physique de Descartes;* Foster, *History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries.*

a systematic theory of knowledge; he was interested in discovering a method of truth rather than in a detailed discussion of epistemological problems. In spite of his studied skepticism, he was a dogmatist in the sense of believing in the competence of reason to attain certain knowledge. He was a realist in accepting the existence of an external world, the true nature of which, however, can be discovered only by rational thinking.

46. Successors of Descartes

The Cartesian philosophy presented many difficulties and provoked a host of problems which kept thinkers busy for centuries to come. If God and nature, it was held, are two distinct and independent realities, as the theory demands, there can be no real converse between them. Then God cannot impress the idea of himself upon the mind of man, nor can man know anything of God. It is also inexplicable how God, a pure spirit, should be able to impart motion to matter. These perplexities Descartes sometimes seeks to escape by distinguishing between the substantiality of God and that of souls and bodies: God is the only real substance, all things else are dependent on God, effects of his causality, his creatures. In nominally abandoning the dualism inherent in the system, our philosopher opens the way for the pantheism of Spinoza. A similar dualism is created between God and man when man is endowed with free will, as Descartes endows him, without being able to explain the " great mystery " by his philosophy. Another chasm yawns between man and nature, or mind and body. If mind and body are totally distinct, how can any communication take place between them? By hypothesis, interaction is impossible, and yet such interaction is assumed as a fact. We have, therefore, a double contradiction here: body and soul are independent substances, and yet God is the only true substance, souls and bodies are his creations. Body and soul are independent substances, and yet they act on one another. Moreover, it was asked, if the bodies of animals are machines, why not human bodies?

The Problems

The new philosophy is an attempt to harmonize the mechanical theory of modern science, which it was impossible to

ignore, with the spiritualistic theology and metaphysics which had come in with Christianity. Nearly all of Descartes's difficulties are caused by his task of reconciliation; the function of his successors consisted either in pointing them out or discovering ways of escaping them. It was possible to avoid the dualism of the system (1) by eliminating nature as an independent reality and teaching absolute idealism (Malebranche); (2) by eliminating mind as an independent reality and accepting materialism (Hobbes, La Mettrie, and the French materialists); (3) by making both mind and matter manifestations of an absolute substance, God or Nature (Spinoza). Or it was possible to retain the dualism and frankly deny the possibility of interaction (parallelism). In addition to the metaphysical problems, questions concerning the origin, nature, and method of knowledge demanded further attention; and in this work English empiricism and French sensationalism took the leading part.

The philosophy of Descartes met with bitter opposition from the Jesuits (having been placed on the Index in 1663) and the Calvinists in Holland, and was prohibited in the universities of France and Germany. It gained followers, however, in the new Dutch universities, particularly among the theologians, and in France, where it was taken up by the Oratory of Jesus. Among those who were interested in the metaphysical problems suggested by Cartesianism, especially in the problem of the relation of mind and body, we mention: Regis (1632-1707), De la Forge, Cordemoy, Clauberg (1622-1665), Bekker (1634-1698), who tries to prove, on Cartesian principles, the impossibility of demonology, witchcraft, magic, and other superstitions, and Arnold Geulincx (1625-1669). Clauberg holds that the soul cannot produce movements in the body, but can *direct* such movements as the driver guides his horses. Antoine Arnauld (1612-1694), author (with Nicole) of *Art de penser,* or the Port-Royal Logic as it came to be called, and a follower of Jansenism, accepted the philosophy of Descartes.

Most of these Cartesians reject the theory of interaction, or *influxus physicus,* as it was called, and have recourse to the will of God in explanation of the body-mind relation. Body and mind are distinct; the will does not move bodies; how could it? It is the occasion for such a change taking place in the external world, which God himself brings about. Nor can physical occurrences produce ideas in us: they are only the occasional causes (*causæ occasionales*) for God's producing them in us. This view has been called *Occasionalism.* It is *par-*

Occasionalism

allelism, holding that mental and physical processes are not causally related but run parallel to one another. We have here the beginnings of the criticism of the notion of causation which culminated in Hume's skepticism: how can a mental cause produce a physical effect, or vice versa?

Geulincx explains the matter somewhat differently. It is true, he holds, we cannot act on the physical world nor can the physical world act on us. Yet our volitions are not the occasion for creating movements, nor movements the occasion for creating ideas, by a special act of God. Nor did God preëstablish the harmony between body and soul. God knows what I am going to will, although my will is free; and the entire universe has been arranged in accordance with that knowledge. "God in his infinite wisdom has instituted laws of motion, so that a movement which is entirely independent of my will and power coincides with my free volition." Geulincx also deviates from Cartesianism in his conception of knowledge: we cannot know things as they are in themselves; God alone has knowledge of them, whereas we know only our own ego.

Arnold Geulincx

Works by Geulincx: *Saturnalia,* 1653; *Logica,* 1662; *Ethica,* 1664, ff.; *Physica vera,* 1688; *Metaphysica,* 1691. Edition of works by Land, 3 vols. Monographs by Land, van der Haeghen, E. Pfleiderer, Grimm, Samtleben.

Nicolas Malebranche (1638-1715) looks at the problem presented by Descartes from another angle. He was a member of the Oratory of Jesus, among whom the doctrines of Augustine were popular and who became greatly interested in Cartesianism. The reading of Descartes's *Traité de l'homme* led him to devote himself to the study of the entire system. Although his aim was the harmony of religion and philosophy, Augustinianism and Cartesianism, his books were placed on the Index. His chief works are: *De la recherche de la vérité,* 1675; *Traité de la nature et de la grâce,* 1680; *Traité de la morale,* 1684; *Entretiens sur la religion et métaphysique,* 1688; *Traité de l'amour de Dieu,* 1697.

Idealism

Works ed. by Simon, 4 vols.; translations of a number of his books; monographs by Joly, Ollé-Laprune, Novaro. See also E. Caird, *Essays on Literature and Philosophy;* Pillon, *L'évolution de l'idéalisme,* etc., in *Année philosophique,* vols. IV and V.

If thought is something utterly distinct from motion, Malebranche asks, how can motion produce sensation, and how can

mind perceive real extension if such there be? The thing seems impossible. Spiritual things are spiritually discerned, the like knows the like only. What we see is not the real world or real extension, but a world of ideas, an intelligible world, intelligible or ideal space. The ideas are in God, and God is spirit with spiritual attributes only. A real body, or created space, cannot affect mind; nothing but an ideal body, the idea of a body, can do that. We see all things in God, not in an extended God, but in a thinking God; and the things we see are ideas, not the extended material objects themselves. Thus far, Malebranche's theory is an idealistic pantheism, and if he had stopped here, the verdict of the historians of philosophy who call him a " Christian Spinoza " might seem partly justified. He does not hold, however, that there is but one universal substance, but that there is only one supreme Reason embracing the ideas of all possible things. The material world is *terra incognita;* whether it exists or not, he does not know. Its *idea* is the real immediate object of my mind, and not matter itself; I cannot know that this exists except through natural or supernatural revelation. " If God had destroyed the created world, and would continue to affect me as he now affects me, I should continue to see what I now see; and I should believe that this (created) world exists, since it is not this world that acts on my mind." We believe in such a world because revelation tells us of its existence. Malebranche's system would be pantheism if he had rejected this unknown counter-world whose face is turned away from us, but it would be idealistic pantheism and not Spinozism.

Malebranche's discussions of the problem of causation resemble the criticisms later made by Hume, who examined the French Platonist's doctrine. We cannot derive the notion of necessary connection of cause and effect from outer and inner experience: our right to assume such necessary connection lies in reason; the notion of necessary causation is implied in the notion of universal being.

Mysticism

In Blaise Pascal (1623-1662; *Lettres provinciales,* 1657, *Pensées sur la religion,* 1669), a gifted mathematician and physicist, mysticism is combined with a partial skepticism. Pascal, who sympathized with the Jansenists of Port Royal, a reform movement within the Catholic

Church inspired by Augustinian thoughts, accepted the Cartesian dualism with its mechanical conception of nature. He also recognized the validity of certain first principles, *e.g.*, the existence of space, time, motion, number, matter. But knowledge of ultimates he declared to be beyond our ken; we know neither the ground nor the goal of things. We cannot demonstrate the existence of God nor the immortality of the soul; philosophical proofs may perhaps lead us to a God of truth, but never to a God of love. Reason, therefore, ends in doubt and leaves us in the lurch when it comes to our deepest interests. But in religious feeling we directly experience God and find peace: "the heart has its reasons which reason does not know." Since, however, everything natural,—human nature and human society,—is sinful and corrupt, divine grace, revelation, and the authority of the Church alone can save us.

Works ed. by Bossut; *Pensées,* by Brunschvieg, 1904; transl. of *Thoughts* and *Provincial Letters* by Kegan Paul. Monographs by Tulloch, Boutroux, Girand, St. Cyr, Strowski (3 vols.), Cousin, Vinet, Droz, Dreydorff; Köster, *Ethik Pascals.*

Pierre Poiret (1646-1719) accepted the mysticism of Jacob Boehme. Francis van Helmont (1618-1699), a predecessor of Leibniz in his monadology, is a mystic who was influenced by Platonism and cabalistic lore.

Pierre Bayle (1647-1706; *Dictionnaire historique et critique,* 1695, *Système de la philosophie,* 1737) applies the Cartesian criterion of clear and distinct knowledge as his test in a keen and searching criticism of philosophical and theological dogmatism. With remarkable dialectical skill he lays bare inconsistencies of fact and reason in the doctrines of religion and calls attention to the opposition between reason and revelation, science and religion. Religion is thus limited to revelation, but revelation itself must submit to reason; the historical facts on which it is based must be subjected to critical examination. Religious and metaphysical theories, however, do not affect human morality.

Skepticism

Bayle influenced both Leibniz and Hume, and his *Dictionary* was translated into German by no less a person than Gottsched, one of the leaders of the *Aufklärung.* His destructive criticism proved most potent in the case of the philosophers of the French Enlightenment of the eighteenth century, who, as a recent writer

says, drew copiously from his great work without mentioning the author's name. In 1767 Frederick the Great wrote to Voltaire: "Bayle began the battle. A number of Englishmen followed in his wake. You are destined to finish the fight."

Delvolve, *Religion, critique et philosophie positive chez P. Bayle;* articles by Pillon in *Année philosophique,* 1896-1902; monographs by Feuerbach, Botin.

47. Benedict Spinoza

Descartes is a dogmatist and a rationalist: he believes in the power of human reason to reach sure and universal knowledge.

Rationalism

With the help of self-evident notions and principles, which have their seat in the mind, he undertakes to construct a universal theory as binding on reason as the propositions of geometry. Spinoza shares this faith; for him, too, the goal of philosophy is the complete knowledge of things, and this can be reached by clear and distinct thinking. If we proceed from self-evident principles and prove every step in the argument, we can fashion a body of truth as certain and universal as mathematics. Descartes had given an illustration of the application of the geometric method in the appendix to his *Meditations.* Spinoza follows the same method in his early book on the exposition of Descartes's philosophy and in his chief work, *Ethics.* He begins with definitions and axioms and proceeds to propositions which he demonstrates in the geometrical order, *ordine geometrico,* each proposition occupying exactly the place in the argument where it belongs. To the propositions are added *corollaries,* which are necessary consequences of propositions, and *scholia,* in which propositions are discussed more at length and in less formal manner. His strict adherence to the mathematical method greatly influenced Spinoza's thought, as we shall see later on.

In aim and in method, then, Spinoza follows the example set by Descartes. He is also interested in the same problems as his predecessor, but seeks to solve them in a more consistent and systematic way. Descartes distinguishes sharply between God and nature, mind and body: thought is the attribute of mind, extension the attribute of body. Nevertheless, he declares that God is the sole independent substance, on which all other so-called

substances depend, and that these have merely relative independence. This idea Spinoza takes seriously and works out with logical consistency. If substance is that which needs nothing other than itself to exist or to be conceived, if God is *the* substance and everything else dependent on him, then, obviously, there can be no substance outside of God. Then thought and extension cannot be attributes of separate substances, but are merged with these in God; they are attributes of one single independent substance. Everything in the universe is dependent on it; God is the cause and bearer of all qualities and events, the one principle in which all things find their being. He is the one thinking and extended substance,—the dualism of substances disappears, but the dualism of attributes remains. There can be no interaction between the two attributes, between mental and physical processes; the two series are parallel to each other and never intersect. And wherever there are mental processes, there must be physical processes, and vice versa; and the order and connection of the physical realm is the same as the order and connection of the psychic realm. Dualism gives way to monism, theism to pantheism, interaction to parallelism.

Baruch (Benedict) de Spinoza (1632-1677) was born in Holland, the son of a wealthy Portuguese-Jewish merchant. He studied the Hebrew literature with the purpose of becoming a rabbi, but found as little to satisfy him in Jewish scholasticism as Bacon and Descartes had found in the Christian system. In his state of doubt he became acquainted with the works of Descartes and renounced Judaism. Expelled from the synagogue (1656) and forced to leave Amsterdam, he took up his abode in various Dutch towns and finally settled at The Hague (1669), where he gained his livelihood by grinding lenses. In his profound love of truth, his unselfishness, and his simple mode of life, he exemplified the virtues of the philosopher. But his pantheistic system aroused intense and almost universal indignation, and Spinoza was for centuries despised as an atheist. The only work of his that appeared under his own name during his lifetime was the exposition of Descartes's system, *Cogitata metaphysica,* 1663. The *Tractatus theologico-politicus,* in which he critically examined the Mosaic authorship of the Pentateuch, and advocated freedom of thought and the separation of Church and State, was published anonymously. His posthumous works, including *Ethics, Tractatus politicus, Tractatus de intellectus emendatione,* and *Letters,* appeared in 1677. A Dutch translation of the *Short Treatise* (*Tractatus brevis de Deo et homine eiusque felicitate*), his earliest work, was found in 1850; the original Latin and Dutch texts are lost.

Best edition of works by Van Vlooten and Land, 2 vols., 1882-83. Translations of chief works by Elwes, 2 vols.; of *Ethics* by White, 2d ed.; of *Tractatus de intellectus emendatione* by White; of *Cogitata metaphysica* by Britan; of *Short Treatise* by A. Wolf (with Life); of *Selections* by Fullerton, 2d ed. (Elwes and White used in this book.)

J. Caird, *Spinoza;* Martineau, *A Study of Spinoza;* Pollock, *Spinoza, His Life and Philosophy,* 2d ed.; Joachim, *A Study of the Ethics of Spinoza;* Picton, *Spinoza;* Duff, *Spinoza's Political and Ethical Philosophy;* K. Fischer, *op. cit.,* vol. I, 2; Freudenthal, *Lebensgeschichte Spinozas,* and *Das Leben Spinozas;* Meinsma, *Spinoza en zijn Kring;* Erhardt, *Die Philosophie des Spinoza;* Wahle, *Die Ethik Spinozas;* Dunin-Borkowski, *Der junge Spinoza;* Worms, *La morale de Spinoza;* Brunschvicg, *Spinoza;* Couchoud, *Spinoza.* A history of Spinozism is given in Erhardt's book, pp. 1-66, and a discussion of the different interpretations in the Appendix, pp. 466-502.

The origin of Spinozism has been sought by different students of his doctrines in different sources: in Averroism, in the cabalistic and pantheistic literature of the Middle Ages, in the writings of the Jewish scholars Moses Maimonides and Creskas,* in the speculations of Giordano Bruno. Whatever influence any or all of these teachings may have had on him, the indications are that the philosophy of Descartes furnished the building stones of his system. The problems which occupy his attention, and which he tries to solve, are problems which grew out of the theories of the great French rationalist, and the pantheistic conception which characterizes his own solution was a logical consequence of the Cartesian notion of God as the absolute substance. It is possible, however, that the Neoplatonism of the medieval Jewish thinkers led him to appreciate the pantheistic possibilities of the Cartesian system.

Method

The world is handled in the Spinozistic system like a problem in geometry. Everything is said to follow from the first principle or ground of the universe as necessarily as the propositions of geometry follow from their logical presuppositions. Just as in a mathematical deduction the consequences are not mere temporal effects but as eternal as the principle itself, so things follow from the first cause, not as an evolution in time, but eternally, *sub specie æternitatis.* Time is a mere mode of thought, *modus cogitandi,* there is no before and after, but only eternity. *Causari = sequi, causa = ratio;* no distinction is made between rational or logical ground and real ground. Thought and being are identical. In reality, one thing follows another or is caused: the universe is a causal chain in which each link is necessarily connected with the preceding

* Maimonides holds that to conceive God as the bearer of many attributes would destroy his unity, while Creskas defends this view.

link, just as in a process of reasoning every conclusion is grounded on premises. Moreover, just as a proposition is the necessary consequence of some other proposition in a mathematical demonstration, everything is the necessary effect of something else in nature: the whole is an interrelated system in which every member has its necessary place. That is, the Spinozistic system is strictly deterministic. Again, as there is no purpose or design in mathematics, there is no purpose or design in nature; in this sense, the system is anti-teleological. How could there be design in God? Thought is an attribute of the underlying substance, as much so as extended nature, and cannot, therefore, precede the latter as its final cause. To ascribe purpose to God is to give precedence to thinking, and thinking, as an attribute or manifestation of God, is on the same level with extension.

The Spinozistic system is presented in its most developed form in the *Ethics*. The work is divided into five parts, dealing with the following topics: (1) God, (2) The Nature and Origin of Mind, (3) The Nature and Origin of the Emotions, (4) Human Bondage and the Power of the Emotions, (5) The Power of the Intellect or Human Liberty. The starting-point of the thought is the definition of substance. Substance is that which exists in itself or independently of anything else, that which does not need the conception of any other thing in order to be conceived: nothing can be conceived without presupposing substance, while it can be thought without presupposing anything else; it is the absolutely independent underlying principle.

Universal Substance

From the definition of substance certain consequences necessarily follow. If substance is absolutely independent being, it must be infinite, for otherwise it would not be independent. There can be only one such being, otherwise, again, it would be limited by others and not independent. It is self-caused, *causa sui*, for if it were produced by anything else, it would be dependent on that. It is, therefore, free in the sense that nothing outside of it can determine it; it is self-determined in that all its qualities and actions follow from its own nature as necessarily as the properties of a triangle follow from the nature of a triangle. Individuality or personality cannot be ascribed to substance, for these imply determination or limitation: all deter-

mination is negation. Hence, neither intelligence nor will, in the human sense, belong to it; it does not think and plan and decide, it does not act according to conscious purpose or design: such teleology is entirely foreign to its nature. "I confess," says Spinoza, "that the view which subjects all things to the indifferent will of God and makes them depend on divine caprice, comes nearer the truth than the view of those who maintain that God does everything for the sake of the good. For these persons seem to place something outside of God which is independent of him, to which he looks as to a model while he is at work, or at which he aims as if at a mark. This is, indeed, nothing else than subjecting God to fate, and is a most absurd view of him whom we have shown to be the first and only free cause of the essence and existence of things."

This single, eternal, infinite, self-caused, necessary principle of things is called God or Nature. God is not apart from the world, as Descartes held, an external transcendent cause acting on it from without (theism), but *in* the world, the immanent principle of the universe. God is in the world and the world in him, he is the source of everything that is (pantheism). God and the world are one. Cause and effect are not distinct here; God does not create in the sense of producing something separate from, and external to, himself, something that can exist apart from him; he is the permanent substance or substratum or essence *in* the things. As the active principle or source of all reality, Spinoza, using an old scholastic term, calls him *natura naturans;* as the plurality of objects, the effects or products of the principle, he calls him *natura naturata.*

How else shall we define Nature, or God; what are the attributes of universal reality? By attribute Spinoza means that which the intellect perceives as constituting the essence of substance. Some interpreters (Hegel, Erdmann) understand by this that attributes are forms of our knowledge, not really belonging to God, but attributed to him by human thought. Others (K. Fischer) regard them as real expressions of God's nature, not merely as human modes of thought, but actual properties of God. The latter view is probably the correct one; Spinoza, the rationalist, accepted necessary forms of thought as having objective validity:

Attributes of God

what reason compels us to think has more than mental reality. And yet he felt a certain hesitancy in applying definite qualities to the infinite ground of things, all determination being negation. But he tried to avoid this difficulty by predicating of the infinite substance an infinite number of infinite attributes: every one of them, that is, infinite and eternal in its essence. God is so great that he is conceived as possessing infinite qualities in an infinite degree.

Of these infinite attributes, the mind of man can grasp but two, extension and thought. Nature expresses itself in an infinite number of ways, of which only extension and thought are knowable by man, who is himself a physical and mental being. God or nature, therefore, is (*at least*) both body and mind. Wherever, then, there is space or matter, there is soul or mind, and vice versa; the two attributes, being essential to the nature of substance, must be present wherever the substance is found, and that is everywhere. Extension and thought are each infinite in its own kind, but not absolutely infinite, that is, neither thought nor extension is the sole attribute; since there are many other attributes of God, none of them can be called absolutely infinite. These attributes are absolutely independent of one another and cannot influence each other: mind cannot produce changes in body nor the body changes in mind. "When two things have nothing in common with one another, the one cannot be the cause of the other; for since the effect would contain nothing that belonged to the cause, everything in the effect would be a creation out of nothing." Spinoza here accepts the doctrine of the occasionalists and Malebranche, that only like can produce like, that mind cannot produce motion nor motion mind.

We cannot explain the mental by the physical, as materialism does, nor the physical by the mental, as spiritualism does. Both the mental and the physical realms, the world of thought and the world of motion, are manifestations of one and the same universal reality, both having equal rank; neither is the cause or the effect of the other, both are the effects of the same cause, both flow from the same substance. The one indivisible nature or God, regarded from one angle, is a space-occupying, moving thing; looked at from another, it is an ideal world. This is what we now call psycho-physical parallelism. And the order and

connection in the one realm are the same as in the other. To my notion of a circle there corresponds a real circle existing in nature.

Attributes appear in specific ways or modes. Modes are defined as "the affections or modifications of substance, or that which is in another thing through which also it is conceived." That is, a mode or modification is always the modification of some thing; it cannot be conceived except as the mode of a thing. The attribute of extension manifests itself in particular figured bodies, thought expresses itself in particular ideas and acts of will. We never have abstract thought as such, a barren stretch of thought, nor abstract extension as such, but always particular ideas and particular bodies. We cannot, however, think the latter apart from attributes,—motion or rest, for example, without extension; intellect or will, without mind.

Doctrine of Modes

In one sense, modes are infinite and necessary, in another sense they are finite and temporal. Species, for example, are eternal, whereas the particular individuals pass away; particulars perish, the genus remains. Intellects and wills, or persons, have always existed and will always exist, but particular human beings are born and die. The eternal infinite substance expresses itself forever in definite ways, in an eternal and necessary system of physical and mental forms, in a system of ideas and in a system of bodies. Such an infinite and necessary system of ideas, the totality of all ideas, Spinoza calls the absolutely infinite intellect; the system of modes of extension he calls motion and rest;* the two together constitute the *face of the whole universe.* The face of the whole universe always remains the same, although its parts undergo constant change. Nature, as a whole, may here be compared to an individual organism, the elements of which come and go, but whose form (face) remains the same.

The particular finite objects and minds are not direct effects of the substance of God; each finite thing has its efficient cause in some other finite thing, and so on *ad infinitum.* The par-

* Motion and rest are the modes of extension. Spinoza assumes that since there can be no motion without extension, extension must be the ground of motion. And if extension is the ground of motion, then motion is a mode of extension.

ticular bodies form a chain of interconnected members, a strict causal nexus, and the particular ideas form a similar chain. The particular idea in my mind owes its existence to some other idea, and so on; the particular physical object before me owes its existence to some other physical object; if it had not been for the one, the other would not be. It was not, however, essential to the universal substance that this or that particular one should have been; neither one follows of necessity from the nature of God. Yet not a single thought or body could exist were it not for the permanent underlying reality to which all things belong, of which all are states. Spinoza is well aware that we cannot logically derive this or that particular thing, the finite mode, from the notion of substance; that we can never deduce particulars from concepts. Given the notion of an infinite extended and thinking substance, we cannot show that such and such an individual necessarily follows. But we can say, Spinoza believes, that given such a substance, thoughts and bodies necessarily follow. As all the properties of the triangle follow from the definition of the triangle, so all the properties of the universe follow necessarily from the substance. We cannot, however, deduce from the concept of the triangle the existence, number, size, and shape of different triangles. Similarly, we cannot deduce from the notion of substance or God the existence, number, and properties of the different finite objects in the world, the so-called modes or forms, in which substance appears, the particular concrete men, plants, and bodies now existing. These do not follow necessarily from the idea of substance, they are contingent and accidental as regards God. Spinoza explains them as effects of each other, as it were. Here we are confined to the ordinary scientific explanations, which do not go very deep; rational explanation, *sub specie æternitatis,* is out of the question.

Conceived under the form of eternity, God is his infinite attributes; conceived under the form of time, or through the imagination, God is the world. To the senses and the imagination, nature appears in the form of isolated separate phenomena, but that is a purely abstract and superficial way of viewing it; to the understanding, nature is one universal substance and the particular phenomenon but a limited form of it, a negation of

all the other forms in which substance expresses itself. No mode, then, can exist except as the mode or modification of a substance; the substance is the abiding principle, the mode is transitory. The particular mode, therefore, is not permanent, it is but a temporal expression of the substance.

Spinoza's doctrine of modes is determined by his rationalistic presuppositions. Logically, we cannot deduce the particular modes from the notion of God, hence they have no true reality, are not essential. And yet the essence of things, the universals of scholasticism, are necessary ideas in God; besides, experience seems to show that though particulars do not endure, the classes (species, genus) to which they belong do. The conclusion is, therefore, drawn that modes are infinite, necessary, and eternal in the sense that the face of the universe remains unchanged. But it is hard to see why particular modes should not be necessary consequences of substance since they have their source in it, and since everything flows necessarily from it. Spinoza's trouble is caused by his attempt to explain the universe logically. Influenced by the method of geometry, he holds that things follow eternally from the first principle, which would make change and evolution impossible; experience, however, convinces him that there is change. In order to do justice to both logic and the facts, Spinoza invents the doctrine of necessary modes and contingent modes.

According to Descartes, there are corporeal substances and soul-substances, which act on one another. According to Spinoza, there is but one substance or principle, on which all processes, both physical and mental, depend and of which they are the processes. Hence, there can be no such thing as a soul or ego, a spiritual substance that has thoughts, feelings, and volitions; the mind consists of its thoughts, feelings, and volitions. Such states are not effects of bodies or of bodily processes; ideas or states of mind correspond to bodily processes, the two series are parallel; they are, however, processes of one and the same thing, expressed in two different ways. They do not influence one another, there is no interaction between them.

Human Mind

All things, therefore, are modes or forms of matter, and modes or forms of mind: all bodies are animate and all souls have

bodies. Where there is body, there are ideas or mental phenomena; wherever there are mental processes, there are bodies. The human mind is, therefore, called by Spinoza the idea of the human body; the body or motion is an object or process in space corresponding to an idea. The human body is very complex, it is made up of many parts. So, too, the human mind is composed of many ideas. The more complex a body, the more adequate knowledge is possible to the mind corresponding to it. The human mind is not only the idea of the body, but is at the same time conscious of its own actions, or self-conscious; hence Spinoza calls it " the idea of the idea of the body," or an " idea of the mind." The mind, however, knows itself only in so far as it perceives the ideas of the modifications of the body.

The order and connection of ideas is the same as the order and connection of things; the order and connection of the actions and passions of the body is coincident with the order and connection of the actions and passions of the mind. Every thing is both mind and body, *idea* and *ideatum*. All ideas or thoughts in the universe form a unified mental system corresponding to the natural system. Every soul is a part of the infinite intellect, which is composed of an infinite number of souls and ideas and is an eternal mode of the thought of God. If all this is true, and if the physical order or nexus is causal, the mental series must also be causally determined.

Nothing can happen in the body that is not perceived by the mind, that is, that has not a corresponding mental state. In this sense, the human mind must perceive everything that happens in the human body. But it does not know the body itself, nor that the body exists, except through ideas corresponding to such modifications of the body. In the same way, it knows the existence and nature of other bodies: because its body is affected by other bodies. All such sense-perceived knowledge, however, is not clear and distinct, but confused; we gain no *adequate* knowledge of our own body or of external bodies through these ideas. As often as the mind is determined from without, by a chance coincidence, its knowledge is confused; it is only when it is determined from within that it contemplates things clearly and distinctly: then it beholds several things at

once, and is determined to understand in what they differ, agree, or oppose one another.

We are here carried over into Spinoza's theory of knowledge, which he discusses in Part II of the *Ethics* and in his work on the *Emendation of the Intellect.* (1) Obscure and inadequate ideas have their source in the imagination; they depend on sense-perception, and sensations have as their object the modifications of the body. Uncritical experience and mere opinion do not yield genuine knowledge. (2) We also have adequate knowledge, clear and distinct ideas, rational knowledge. Reason contemplates things as they really are, knows their necessary connection, conceives them under the form of eternity. It comprehends the universal essences of things in the particular qualities which these things have in common with all things, and understands these necessary and eternal essences in their relation to God's being: such knowledge is self-evident, it carries its own evidence with it; in this sense truth is its own criterion; even as the light reveals both itself and the darkness, so truth illuminates itself and error. (3) Intuitive knowledge Spinoza calls the highest kind of knowledge; it is hard to say, however, just how it differs from the preceding stage. By it everything is conceived as necessarily grounded in God's being and following from it: "it advances from an adequate idea of the objective essence of certain attributes of God to the adequate essence of things." The imagination does not see things whole; it loses itself in details, does not grasp the unity of phenomena, does not understand their meaning. It is the source of prejudice, illusion, and error; it gives rise to the belief in so-called general ideas existing independently of individuals, in final causes or purposes in nature, in spirits, in a God having a human form and human passions, in free will, and other errors. Reason and intuitive knowledge repudiate all such products of the imagination as inadequate; they alone enable us to distinguish between truth and error. Whoever has a true idea knows it.

Theory of Knowledge

Error Spinoza conceives as mere lack of knowledge. No idea is as such either true or false; what makes it true or false is the assumption of the presence of an object when it is not present. There is lacking the knowledge that the idea is a

mere idea, an illusion. "We form inadequate ideas because we are a part of some thinking being, some of whose thoughts form the essence of our soul in their entirety, others only in part."

In so far as the soul knows ideas, it is intelligence or intellect, in so far as it affirms and denies what is true and false, we call it will. Neither the intellect nor the will is a faculty of the mind; there are no soul-faculties, only ideas exist in the mind. The soul is reduced to ideas, it is an idea of the body: it mirrors physiological processes. No distinction is made by Spinoza between knowing, feeling or emotion, and willing. Volitions, too, are nothing but ideas of things; the particular act of will and the particular idea are identical. Hence, intelligence and will are essentially the same: the will is an idea affirming or negating itself. This act of affirmation or negation (judgment) is not, as with Descartes, an act of free choice, or capricious, but determined by the idea itself. There is no such thing as free will; everything in nature is determined, everything follows necessarily from the universal substance. The human soul is merely a mode of the divine thought; besides, every particular act of will is determined by another mode, as we have seen. Moreover, there is no causal relation between mind and body: the will cannot move the body. Everything physical obeys mechanical laws. The decision of the will, desire, and the causal determination of the body are one and the same thing; considered under the attribute of thought we call it decision, under the attribute of extension we call it determination. Man thinks he is free because he is ignorant of causes; the falling stone would regard itself as free if it were conscious. Because he thinks himself free, he forms the ideas of praise and blame, sin and guilt. Spinoza identifies human freedom with caprice or indeterminism; in the case of God, however, freedom means action in accordance with his nature.

Intellect and Will

Will and intelligence, then, are identical. Corresponding to the stages of the intellect: sensation or imagination and reason, we have different stages of the will: passions and will proper. The passions are confused and inadequate ideas corresponding to physiological states,—the passive side of the human mind. To

our ignorance and confusion are due the passions of love, hate, hope, and fear. In so far as the mind has clear and distinct (adequate) ideas, in so far as it knows and understands, it is not passive but active: it is rational will. In this sense, man is evidently free; here he is not under mechanical compulsion but under the sway of teleology, governed by purpose. How this is possible in Spinoza's system is another question. He says: "If we mean by a man acting under compulsion one who acts contrary to his will, then I admit that we are in no wise compelled in certain things and in so far have free will." Spinoza's main contention is against absolute freedom of choice or a groundless will. When the soul comprehends the meaning of things, or has adequate ideas, it has no passions and ceases to be in bondage. The more confused a man's knowledge, the more he is passion's slave, the more limited, the more impotent and dependent he is. The clearer his knowledge, the more rational he is,—the better he understands the universe in all its relations, —the freer he will be from passions and the less dependent on them. To know means to be free from hate and fear, anger and envy, yea even from love and hope, pity and repentance. He who knows the true causes of things or sees them in their necessary relations to God, will love God: this intellectual love of God (*amor Dei*) is the love of God for himself, for man is a mode of God. And in so far as God loves himself, he also loves men, for they are a part of him.

The passions are not errors of human nature, but properties necessarily belonging to it, hence they must be studied as if they were "lines, surfaces, and bodies." There are three fundamental passions: desire, joy, sorrow. The basis of all passion is the desire for self-preservation. Every thing strives to maintain itself in its being; in man, too, there is such striving (*appetitus*) to preserve the bodily and mental life. What human nature strives for, the human mind is conscious of; this conscious striving is *voluntas,* will, when related to soul alone; or *cupiditas,* conscious appetite, when related to soul and body. What promotes our desires is good, the opposite bad. Every man, therefore, aims to increase his being; when it is intensified, he feels joy, otherwise sorrow. Joy is the transition from less to greater perfection; sorrow, the transition from greater

to less. Joy is not perfection itself; if a man were born perfect, he would not have the feeling of joy. Man seeks to preserve the joyful feelings and to rid himself of sorrow. We love the causes of what pleases us, hate those injuring us. The cause of a pleasure or pain conceived as future is hope or fear. The individual believes he is the cause of his own acts, hence he feels self-satisfaction when they are pleasant and remorse when they are painful. The more pleasurable feelings are, the more active they are: the more active we are and the more we feel our power. Hence, such emotions as envy and pity are bad for us, they lower our sense of power and our vitality. Like Descartes, Spinoza is one of the forerunners of modern physiological psychology.

The impelling motive of Spinoza's thought was ethical and religious: "the mind's highest good is the knowledge of God, and the mind's highest virtue is to know God." The end can be attained only through philosophy; ethics must be based on metaphysics. The system culminates in ethics: the title of our philosopher's chief work is *Ethics*. With Hobbes, he starts out from egoistic premises, but modifies them in such a way as to weaken their effect. Every being strives to preserve its own being, and this striving is virtue. Virtue is, therefore, power; everything that tends to diminish the power of the body or mind is bad: pity and sorrow are bad, joy is good. Nature demands nothing contrary to nature, hence it demands that every one love himself, his utility, and strive for everything that leads to greater perfection. The power of nature is the power of God himself; each individual, therefore, has the highest right to all he regards as useful to himself and to appropriate it in every way, whether by force, strategy, or entreaties. With perfect right the larger fishes take possession of the water and devour the little ones. So far, the doctrine is bald egoism: might makes right. Spinoza, however, does not stop here. Virtuous action is rational action: it is only when the soul has adequate ideas, or knows, that it may be said to be really acting. Passion is not power, but weakness, slavery. Every man should seek what is *truly* useful to him, and reason tells him that nothing is useful to the soul except what is a means to knowledge. In life it is before all things useful to

Ethics and Politics

perfect the understanding or reason; in this alone man's highest happiness or blessedness consists; indeed, blessedness is nothing else than contentment of spirit, which arises from the intuitive knowledge of God. To perfect the undertanding is nothing other than to understand God, God's attributes, and the actions which follow from the necessity of his nature.

Moreover, there is nothing more useful to a man, in his desire to perfect his being, than unity of purpose among men, nothing more excellent than that all should so, in all points, agree that the minds and bodies of all should form, as it were, one single mind and one single body. Nothing helps a man to preserve his real being more than another rational man who seeks his own true utility; hence, men will be most useful to one another if each will seek his own true good or act under the guidance of reason. Consequently, men who are governed by reason desire nothing for themselves which they do not also desire for the rest of mankind, and hence are just, faithful, and honorable in their conduct. Whatever is good for other men is also good for me. Hence, love of enemy is good; hatred, anger, revenge, envy, and contempt are evil. Humility, self-denial, remorse, and hope are not good, though they may prepare weak-minded persons for a more rational life.

In the state of nature every man has the right to do what he can do; might makes right. But conflict would arise in such a situation, for men overshoot their powers, hence it is necessary that men relinquish their natural rights in order that all may live in peace (social contract). This is done in the State, which limits natural rights and the caprice of the individual in the interests of general welfare. It is only in organized society that justice and injustice, merit and guilt have meaning; that is to say, morality is justified on the ground that it makes social life possible.

Spinoza's ethics is individualistic in the sense that its fundamental motive is the desire for individual perfection or happiness. A man should seek his own interest, his highest interest is knowledge of the universe or God, which brings peace of mind; with this end in view it is to his interest to regard the welfare of others. It is universalistic when it teaches that the highest good of the mind is the knowledge of God and the highest virtue

of the mind to know God. The supreme good is the love of God which comes from an adequate knowledge of him.

Our highest good consists in the intellectual love of God, which is eternal, like reason itself. The human mind cannot be absolutely destroyed with the body, but something of it remains which is eternal, as something remains of the body, which is eternal. We feel and know by experience that we are eternal, and this existence of the mind cannot be limited by time nor manifested through duration.

Notion of God

The term God is variously employed in the Spinozistic system: He is identified with the universe, or he is identified with his attributes, or he is the absolute unified substance with its infinite attributes, or he is the unified substance itself, higher than these attributes. His real meaning most likely is that God is the universe conceived as an eternal and necessary unity, an organic whole, a unity in diversity.

Spinoza expressly denies personality and consciousness to God: he has neither intelligence, feeling, nor will; he does not act according to purpose, but everything follows necessarily from his nature, according to law; his action is causal, not purposive. God's thinking is constituted by the sum-total of the ideas in the world. He has the power or attribute of thought which expresses itself in the absolutely infinite intellect or in the eternal and necessary modes of thinking, and these, in turn, express themselves in passing human minds. Spinoza sometimes, however, speaks of God having a knowledge of his own essence and of all that follows from it.

DEVELOPMENT OF EMPIRICISM

48. John Locke

The Problem

Hobbes, as we have seen, was a rationalist in his ideal of knowledge. With Descartes he held that mere experience will not give us certainty. At the same time, he agreed with his compatriot Bacon that sensation is the source of what we know. Here were two lines of thought which

did not seem to fit together in the system; the sensationalistic origin of knowledge appeared to undermine the validity of knowledge, to destroy its certainty. Hobbes himself felt the difficulty and was led by it to occasional skeptical conclusions concerning physics. To John Locke this problem becomes the all-important one; in him philosophy turns to the theory of knowledge and undertakes an examination of the nature, origin, and validity of knowledge,—an " essay concerning human understanding."

John Locke (1632-1704) studied philosophy, natural science, and medicine at Oxford. He was repelled by the scholastic methods of instruction which still prevailed at the university, but found great satisfaction in the writings of Descartes. For many years (1666-1683) he was in the service of the Earl of Shaftesbury, as secretary and as tutor to his son and grandson, and followed his patron to Holland into exile. Returning to England (1689) after the deposal of James II and the ascension of William of Orange to the throne, he held several important public offices, and spent the remaining years of his life (1700-1704) in the household of Sir Francis Masham, whose wife was the daughter of the philosopher Cudworth.

Among his works are: *An Essay concerning Human Understanding,* 1690; *Two Treatises on Government,* 1690; *Letters concerning Toleration,* 1689, ff.; *Some Thoughts concerning Education,* 1693; *The Reasonableness of Christianity,* 1695. The two treatises *On the Conduct of the Understanding* and *Elements of Natural Philosophy* appeared posthumously.

Collected Works, 1853; philosophical works, edited by St. John, in Bohn's Library. *Essay* ed. by Fraser, 2 vols.; Selections from *Essay* by Russell.

Fox Bourne, *Life of Locke,* 2 vols.; monographs by Fraser, Fowler, S. Alexander, Fechtner, Marion. Green, *Introduction to Hume;* Moore, *Existence, Meaning and Reality in Locke's Essay;* Curtis, *Locke's Ethical Philosophy;* Thilly, *Locke's Relation to Descartes, Phil. Rev.,* IX, 6; Cousin, *La philosophie de Locke;* Ollin, *La philosophie générale de Locke;* Bastide, *Locke: ses théories politiques,* etc.; de Fries, *Substanzlehre Lockes;* Keyserling, *Willenstheorie bei Locke und Hume;* Crous, *Religionsphilosophische Lehren Lockes;* von Hertling, *Locke und die Schule von Cambridge;* monographs on the relation of Locke and Leibniz by Hartenstein, von Benoit, and Thilly. See also the general works on English philosophy mentioned pp. 254, f., and Hibben, *Philosophy of the Enlightenment.*

Philosophy, according to Locke, is the true knowledge of things, including the nature of things (*physics*), that which man ought to do as a rational voluntary agent (*practica,* or ethics), and the ways and means of attaining and communi-

cating such knowledge (*semiotics,* or logic, or critic). As the most important of the three, Locke regards the problem of knowledge, holding that before we set ourselves upon inquiries, it is necessary to examine our own abilities and see what our understandings are, or are not, fitted to deal with. This he undertakes to do in his main work, *Essay concerning Human Understanding.* But, he declares, to tell what is certain knowledge, what not, what the limits of our knowing are, we must first study the origin of our ideas. Much depends on discovering the source from which our knowledge springs, for if it is true, as Descartes and many others held, that we have an innate knowledge of principles, there would seem to be no reason for questioning its validity. The problem of innate ideas is, therefore, taken up by the English thinker in the first book of his *Essay,* which, however, was written last.

Origin of Knowledge

Assuming that the mind must be conscious of its innate principles, if there be any,—since nothing can be said to be in the mind of which it is unconscious,—Locke proceeds to refute the doctrine of inborn truth. There are no speculative or practical principles present to the minds of men, and even if there were, they might have been acquired in the same way as other truths. If a principle can be imprinted on the soul without being known, it is impossible to distinguish between what is native and what not. It cannot be said that we first become aware of such truths when we begin to exercise our reason, for children, the uneducated, and savages are a long while in possession of their reason without knowing them. Nor is immediate assent to a proposition proof of its primitiveness. The moral laws, too, cannot be called innate, for they are not self-evident or universally recognized, and do not impel men to action. What to many peoples is sin, is duty to others. To say that such ideas have been gradually obscured through prejudice, education, and custom, is to deny their universal acceptance. If we hold that they cannot be obliterated, they ought to appear in all men, and most clearly in children and the uncultured. That the idea of God, on which Descartes lays such emphasis, cannot be innate is proved by the fact that entire tribes either want the idea and knowledge of Deity or have no clear impression of him.

But even if all mankind everywhere had a notion of God, it would not follow that the idea of him was innate. The ideas of fire, the sun, heat, or number are not proved to be innate because they are so universally received and known amongst mankind. A rational creature reflecting on the visible marks of divine wisdom and power in the works of creation, cannot miss the discovery of a Deity.

In short, ideas and principles are just as little innate as the arts and sciences. The mind, in its first being, is a blank tablet, a *tabula rasa,* a " dark chamber," an " empty cabinet," " white paper," void of all characters, without any ideas. The question now is, how comes it to be furnished? Whence has it all the materials of reason and knowledge? To this Locke answers in one word,—from experience; in that all our knowledge is founded; and from that it ultimately derives itself. The two sources of all our ideas are *sensation,* through which the mind is furnished with sensible qualities, and *reflection,* or internal sense, which supplies the mind with ideas of its own operations, such as perception, thinking, doubting, believing, reasoning, knowing, willing. The first capacity of the human intellect is, that the mind is fitted to receive the impressions made on it, either through the senses by outward objects or by its own operations when it reflects on them. By idea Locke means whatsoever the mind perceives in itself, or is the immediate object of perception, thought, or understanding.

The ideas, thus received, are *simple ideas,* which the mind has the power to repeat, compare, and unite, even to an almost infinite variety, and so can make at pleasure new *complex ideas.* But no understanding has the power to invent or frame one new simple idea or destroy those that are in the mind. Some of these simple ideas come into our minds by one sense only, *e.g.,* ideas of color, sound, taste, heat, cold, solidity; some convey themselves into the mind by more senses than one, *e.g.,* space or extension, figure, rest, and motion (through sight and touch). Some are had by reflection only, that is, the mind observes its own actions about those ideas it has, and gets other ideas in this way, *e.g.,* it notices its operations of perception, retention (contemplation and memory), discerning, comparing, compounding, naming, and abstracting. Some ideas, finally, we receive through

both sensation and reflection, as pleasure and pain, or uneasiness, power, existence, unity, succession, or duration.

Most of the ideas of sensation are not the likeness of something existing without us, not exact images and resemblances of something inherent in the object. The objects have the power to produce certain ideas in us; we may call such powers qualities. Now, some of these qualities belong to the objects themselves, are utterly inseparable from them; they are called by Locke original or *primary qualities;* such are: solidity, extension, figure, motion or rest, and number. Qualities which are nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities, as colors, sounds, tastes, etc., are called *secondary qualities.*

All our simple ideas are received through the inlets before mentioned; out of them all our knowledge is made, just as the words are made out of the twenty-six letters of the alphabet. External and internal sensation alone are the windows by which light is let into the dark room of the understanding. But the mind can, by its own power, put together these ideas it has and make new *complex ideas,* which it never received so united; it can set two ideas by one another so as to take a view of them at once, by which way it gets all its ideas of relations; and it can separate them from all other ideas which accompany them in their real existence, which is called abstraction. The mind is passive in the reception of all its simple ideas, but exerts power over them in the acts just described. The endless number of complex ideas may be all embraced under three heads: modes, substances, and relations.

Our *ideas of modes* are complex ideas which do not contain in themselves the supposition of subsisting by themselves, but are considered as dependencies on, or affections of, substances, *e.g.,* triangle, gratitude, murder. *Simple modes* are only variations or different combinations of the *same* simple idea, without the mixture of any other, as a dozen or a score (addition of units). *Mixed modes* are compounded of simple ideas of *several* kinds, put together to make one complex one, *e.g.,* beauty, which consists of a certain composition of color and figure, causing delight or pleasure in the beholder. By taking the simple idea of space and combining it, we get the simple modes of

immensity, figure, place, infinite expansion; hours, days, years, time and eternity, succession are simple modes of duration. There are also simple modes of thinking or of the operations of the mind.

Our *ideas of substances,* too, are complex ideas made up of simple ideas, put together by the mind. The complex idea of a substance consists of a combination of ideas of qualities, supposed to represent a distinct particular thing, and the confused idea of a support or bearer of these qualities. Thus, the idea of the substance *lead* consists of this supposed or confused idea of a bearer, to which are joined ideas of a certain dull whitish color, certain degrees of weight, hardness, ductility, and fusibility. We notice that a certain number of simple ideas got from sensation and reflection constantly go together; we suppose they belong to one thing and call them, so united, by one name. We cannot imagine how these qualities (ideas) can exist by themselves, so we accustom ourselves to suppose some substratum wherein they do subsist and from which they result; which, therefore, we call substance. We have ideas of material substances, spiritual substances, and of God.

The mind also gets certain *ideas of relation* from comparing one thing with another, it brings or sets one thing by another, as it were, carries its view from one to the other, or relates them. All things are capable of relation, and all ideas of relation are made up of simple ideas. The *idea of cause and effect* is the most comprehensive relation wherein all things that do or can exist are concerned; it is derived from sensation and reflection. Our senses tell us that things change, that qualities and substances begin to exist, that they owe their existence to the operation of some other being. We call that which produces any simple or complex idea *cause;* that which is produced, *effect:* thus, heat is the cause of the fluidity of wax. Cause is that which makes any other thing,—either simple idea, substance, or mode, —begin to be; effect is that which had its beginning from some other thing. Different kinds of causation are creation, generation, making, alteration. But to have the idea of cause and effect, it suffices to consider any simple idea or substance as beginning to exist by the operation of some other, without knowing the manner of that operation.—There are countless other

relations, relations of time, place, and extension, relations of identity and diversity, moral relations, and so on.

The materials of our knowledge, then, are furnished to the mind by sensation and reflection; the mind acts on them and makes complex ideas. The question arises, What cognitive value have such ideas, what conditions must they fulfil in order to be knowledge? Ideas should be *clear and distinct,* because confused and obscure ideas make the use of words uncertain. *Real* ideas are such as have a foundation in nature, such as have a conformity with the real being and existence of things, or with their archetypes. Our simple ideas are all real, not because they are all images or representations of what exists,—only the primary qualities of bodies are that,—but because they are all the effects of powers without us. Mixed modes and relations have no other reality but what they have in the minds of men, they are not intended for copies of things really existing; they are real when they are so framed that there is a possibility of existing conformable to them. They are themselves archetypes, and so cannot be chimerical unless inconsistent ideas are jumbled together in them. But our complex ideas of substances are intended by us to be representations of substances without us, as they really are; they are, therefore, real only in so far as they are such combinations of simple ideas as are really united, and co-exist, in things without us. Ideas are *adequate* which perfectly represent the archetypes which the mind supposes them taken from, while *inadequate* ideas are but a partial or incomplete representation of these archetypes. Simple ideas and modes are all adequate; but ideas of substances are all inadequate, because they desire to copy things as they really exist. Whenever the mind refers any of its ideas to anything extraneous to them, they are then capable of being called *true or false;* the mind here makes a tacit supposition of their conformity to that thing, which may be true or false.

Nature and Validity of Knowledge

Since all our knowledge is about ideas, knowledge is nothing but the perception of the connection and agreement or disagreement and repugnancy of any of our ideas. We perceive that white is not black, that the idea of white and the idea of black do not agree. There are different degrees of evidence in knowl-

edge. Sometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the intervention of any other ideas. This is *intuitive* knowledge. The mind perceives at once that white is not black, that a circle is not a triangle, that three are more than two. This is the clearest and most certain knowledge that human frailty is capable of; it need not be proved and cannot be proved, it is irresistible, self-evident, and on it depends all the certainty and evidence of all our knowledge. Sometimes the mind does not perceive the agreement or disagreement between two ideas at once; it does not discover their agreement or disagreement until it has compared them with one or more other ideas: this is mediate knowledge, or reasoning, or *demonstrative* knowledge. This knowledge by intervening ideas or proofs is certain, yet its evidence is not so clear and bright, nor the assent so ready as in intuitive knowledge. Every step, however, in this knowledge must have intuitive certainty, in order that the conclusion may be certain. Such demonstration we have in mathematics and wherever the mind can perceive the agreement or disagreement of ideas by the help of intermediate ideas. In intuitive and demonstrative knowledge we have certainty; whatever comes short of one of these is but faith or opinion, but not knowledge, at least in all general truths.

But what shall we say of our knowledge of the external world? We have ideas of external objects, in the mind; that we have them is as certain as anything can be. But is there anything more than that idea; can we certainly infer the existence of anything without us, which corresponds to this idea; is there a real world outside? Sometimes we have ideas to which nothing does correspond at the time, as in dreams. We are provided with an evidence here which puts us past doubting; that is, our knowledge of the particular existence of finite beings without us goes beyond bare possibility, and yet does not reach perfectly intuitive or demonstrative knowledge. Locke calls it *sensitive* knowledge. We have no self-evident knowledge of real existence except of ourselves and God; our own existence we know by intuition, that of a God reason makes clearly known to us. The notice we have by our senses of the existence of things without us, though not so certain as intuitive knowledge or the

deductions of our reason, yet is an assurance that deserves the name of knowledge. But, besides this assurance from our senses themselves, we are confirmed by other concurrent reasons: we cannot have them but by the inlet of the senses; they differ from memory-images; they are often accompanied by pain; they corroborate each other's testimony.

What now is the extent of our knowledge: how far does it reach? Since it is a perception of agreement or disagreement of any of our ideas, it follows that our knowledge cannot reach further than our ideas. Where ideas are wanting, there can be no knowledge; we are limited to the dull and narrow information received from some few and not very acute ways of perception. But our knowledge is even narrower than our ideas; not only can we not go beyond what we experience, but we neither have nor shall have the knowledge of our ideas we desire to have. We do not experience everything we are capable of experiencing nor do we understand everything we actually perceive. Our ignorance is due, in the first place, to a want of ideas. More perfect beings may have more simple ideas than we have and more acute senses. Some things are too remote for our observation (planets), others too minute (atoms). Then, again, we cannot discover any necessary connection between many of our ideas: we do not see what connection there is between the figure, size, or motion of the invisible parts of a body and the color, taste, or sound the body has; we do not understand the relation between the yellow color, the weight, the malleableness, the fixedness and the fusibility of gold, so that knowing one or two or more of these qualities, we can know that the others must be there. Given the definition of a triangle, it will follow necessarily that the sum of its angles is equal to two right angles: that is a self-evident proposition, which is true of everything called a triangle whether there is such a thing or not. But from my idea of gold as a yellow metal having a certain weight, I cannot deduce with certainty the fact that it is malleable. Observation tells me that it is malleable, but that all gold is malleable is not a self-evident truth. What I want is universal and self-evident truths; of these knowledge is made up, but I cannot have them concerning all my experience.

Limits of Knowledge

Another thing to be remembered is that to be real knowledge, my ideas must, in some way, agree with the reality of things. Here, again, my knowledge is limited. All simple ideas represent things outside, because they must necessarily be the product of things operating on the mind. There are bodies outside which arouse in us the sensation white; though we may not know what it is that produces this sensation, and how it is done, yet there is something there that does it. Our complex ideas, too, for the most part, give us knowledge, but for another reason. They are not intended to be copies of anything, nor referred to the existence of anything as originals; they are patterns or archetypes of the mind's own making. The mind of its own free choice combines ideas without considering any connection they may have in nature. If we remember this, we shall see that they give us certain knowledge. Such knowledge we have in mathematics. The mathematician forms an idea of a triangle or a circle; these are ideas in his mind, made by himself. The propositions which he deduces logically from these definitions are true and certain. If there is such a thing as a triangle, they are bound to be true of it wherever it exists.

The case of our complex ideas of substances, however, is different. Our ideas of substances are supposed to be copies of, and referred to, archetypes without us. If the qualities we put together in our ideas of substance coexist in nature, if, for example, there is something in nature having the qualities yellow, malleable, fusible, fixed, etc., then the idea of substance is the object of real knowledge. And we may say, whatever simple ideas have been found to coexist in any substance may with confidence be joined together again. But, it is to be noted, we can make no universal propositions concerning substances, because we do not see any necessary connection between the ideas put together. Experience tells us that certain qualities coexist in an unknown bearer or substratum, but we cannot discover the dependence of these qualities on one another, and we cannot infer from the qualities we observe going together what other qualities *must* go with them. There is not a single general affirmation of gold that we can know to be certainly true, true in the sense of being absolutely self-evident. If we could discover a necessary connection between

malleableness and the weight of gold, we might make a certain universal proposition in this respect, and say: All gold is malleable; the truth of the proposition would be as certain as the truth: The sum of the angles of a triangle is equal to two right angles. There is another difficulty in the case of substances which complicates the problem. The substances in nature are not independent, isolated things; their qualities depend, for the most part, on many invisible conditions in nature. Whence the streams come that keep all these curious machines in motion and repair, how conveyed and modified, is beyond our notice and appreciation. To understand them aright, therefore, we should understand the universe as a whole. But we cannot even discover the size, figure, and texture of their minute and active parts, much less the different motions and impulses made in and upon them by bodies from without. Hence, we do not know what changes the primary qualities of one body regularly produce in the primary qualities of another, and how; nor do we know what primary qualities of any body produce sensations or ideas in us. We do not perceive the necessary connection between these primary qualities and their effects. Hence, we get very little universal certainty here, and must content ourselves with *probability*. For this reason we can have no perfect natural science. Of spirits we are even more ignorant. "As to a perfect science of natural bodies (not to mention spiritual beings), we are so far from being capable of any such thing that it is lost labor to seek after it."

General certainty is, therefore, never to be found except in the agreement and disagreement of our ideas. It is the contemplation of our own abstract ideas that alone is able to afford us general knowledge. We have no self-evident propositions as to real existence (except in the case of God and ourselves), and can build no science on them.

Most of the propositions we think, reason, discourse, and act upon are such that we cannot have undoubted knowledge of their truth. Yet some of them border so near upon certainty that we make no doubt at all about them, but assent to them firmly. There are different degrees and grounds of probability: conformity with our own experience and the testimony of others' experience. The bare testimony of revelation, however, Locke

regards as the highest certainty; our assent to it is faith. Faith is a settled and sure principle of assent and assurance, and leaves no manner of room for doubt or hesitation. Only,—we must be sure that it *is* a divine revelation. And, therefore, our assent can be rationally no higher than the evidence of its being a revelation. No proposition can be received for divine revelation if it be contradictory to our clear intuitive knowledge; faith can never convince us of anything that contradicts our knowledge. There can be no evidence that any traditional revelation is of divine origin, in the words we receive it and in the sense we understand it, so clear and certain as that of the principles of reason. But things which are beyond the discovery of our natural faculties, and *above* reason, are, when revealed, the proper matter of faith. Thus, that the dead shall rise and live again, is purely a matter of faith with which reason has directly nothing to do.

Metaphysics

We have heard Locke's answers to the questions concerning the origin, validity, and limitations of knowledge; let us now consider the general world-view on which his thought is based. He did not work out a complete theory of reality in any separate book, but his thought rests upon philosophical presuppositions which may be discovered in his *Essay*. In spite of the restrictions which he places upon knowledge and his frequent skeptical misgivings, he adopts, with variations, the metaphysics of common-sense which Descartes had organized into a system.

The world is composed of substances: supports or bearers in which powers, qualities, and actions inhere and from which they flow; the grounds and causes of qualities and acts. Substances are of two kinds, bodies and souls. The body is a substance whose attributes are extension, solidity or impenetrability, and mobility or the power of being moved. These are its primary qualities, which we receive through our senses. Hence, there can be space without body, or pure space, a vacuum; we can conceive space without solidity, and motion proves the vacuum. Besides material substances, there exist spiritual substances, or souls. The soul is a real being: we have a clear and distinct idea of it. Its qualities are the power of perception or thinking and will or the power of putting the body in motion. These

qualities we know through reflection. Thinking, however, is not the essence, but the action of the soul. The soul is an immaterial substance. I have as clear and distinct an idea of spiritual substance as I have of a corporeal substance; I frame the idea of a bodily substance by putting together certain corporeal qualities and supposing a support for them; I form an idea of soul-substance by reflecting upon the operations of my own mind, as thinking, understanding, willing, knowing, and the power of beginning motion, and joining these to a support or bearer. It is as rational to affirm that there is no body because we have no clear and distinct idea of the substance (bearer) of matter, as to say there is no spirit because we have no clear and distinct idea of the substance of a spirit. "Having as clear and distinct ideas in us of thinking as of solidity, I know not why we may not as well allow a thinking thing without solidity, *i.e.*, immaterial, to exist, as a solid thing without thinking, *i.e.*, matter, to exist, especially since it is no harder to conceive how thinking should exist without matter than how matter should think." Indeed, I know more certainly that there is a spiritual being within me that sees and hears than that there is some corporeal being without me. Besides, incogitative matter and motion could never produce thought, and it is impossible to conceive that matter, either with or without motion, could have, originally in and from itself, sense, perception, and knowledge.

Pure spirit (God) is only active, matter is only passive, but man's soul is both active and passive. It has the power to move the body, as experience shows, and the bodies outside produce changes in the soul; indeed, all our ideas are due to the action of the body on the mind. This is the theory of interaction. It is true, we do not know *how* this is done, but neither do we know how a body moves a body. Indeed, we have a much clearer idea of the active power of moving, in spirit, than in body. It is not easier to conceive an extended being than a thinking being.

Mind and body exist as real beings, and they interact. Bodies act on mind and produce sensations of color, sound, touch, solidity, extension, etc. Of these, the secondary qualities do not represent faithfully the reality outside; objects are not colored,

sounding, fragrant, savory; these are the effects produced on the mind by extended solid objects; the ideas of extension, solidity, and motion are copies of real existing things. Bodies are solid extended things that move. But, so far as we conceive, body is able only to strike and affect body; and motion, according to the utmost reach of our ideas, is able to produce nothing but motion. Hence, when we say it produces pleasure or pain or the idea of color or sound, we are fain to quit our reason, go beyond our ideas, and attribute it wholly to the good pleasure of our Maker.

Locke here strikes a difficulty. The theory of mechanism comes in conflict with the apparent facts of experience. If motion can produce nothing but motion, how can it produce states of consciousness in us? God, he tells us, has annexed these effects to motion which we cannot conceive motion to produce. This is a relapse into occasionalism. It is equally difficult to conceive how mind can start a motion, how the will can cause an act to take place.

But these difficulties he brushes aside in other passages by declaring that it is just as hard to understand how motion produces motion as how motion produces sensation and sensation motion. Experience tells us, however, every moment that the thing is done. He has occasional misgivings on these points, as he has on the question of the immateriality of the soul. His general thought is that mental processes cannot be the action of bare insensible matter, that there could be no sensation without an immaterial thinking being. There is within me some spiritual being that sees and hears. At the same time, he is sometimes in doubt about the nature of this being in us that thinks. Perhaps it is material and perhaps a material being can think. We do not know the real nature of any substance, so how do we know that we have only solid beings that do not think, and thinking begins that are not extended? Possibly, we shall never know whether any mere material being thinks or no. We do not know in what thinking consists nor to what sort of substances the Almighty has been pleased to give that power which cannot be in any created being but merely by the good pleasure and bounty of the Creator. God has annexed effects to motion, we cannot conceive it; why could he not have given

to certain systems of created matter, put together as he thinks best, some degrees of sense, perception, and thought?

These are some of the difficulties and inconsistencies in Locke's system. But his theory remains, in the main, dualistic: there are two substances, material and mental, "incogitative and cogitative." In this he agrees with Descartes, except that he makes solidity or impenetrability the attribute of body. He also agrees with Descartes in accepting the "corpuscularian" hypothesis as the best explanation of the facts. There are extremely small bodies, or atoms, having bulk, figure, and power of motion. These insensible corpuscles are the active parts of matter and the great instruments of nature on which depend not only all their secondary qualities, but also most of their natural operations. But we have no distinct precise ideas of their primary qualities. No one has ever pretended to perceive their distinct bulk, figure, or motion, and no one understands the tie that binds them together. If we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations, one upon another, as we do now know the properties of a square or triangle. We do not know these things; we do not know what bonds hold these corpuscles together, what cement makes them stick together so firmly; we do not know how one moves the other, how motion is transferred to another. So that, after all, this corpuscularian hypothesis very little advances our knowledge of corporeal substances. So long as we do not see the necessary connection between the qualities and powers of bodies, our knowledge is scant. Consequently, there is no science of bodies in the real sense of the term. At any rate, the atomic theory is impossible as a world-view or universal theory.

Besides the two substances, body and mind, there is another spiritual substance, God. We have no innate idea of God, but we may, by the right use of our natural abilities, attain a knowledge of God. It is as certain that there is a God as that the opposite angles made by the intersection of two straight lines are equal. We frame the idea of God, taking the ideas which we derive from experience of existence and duration, knowledge and power, pleasure and happiness, etc., and enlarge every one of these with the idea of infinity; and so putting them together,

make our complex idea of God. We do not, however, know his real essence.

Locke offers the usual causal and teleological proofs of God's existence. Man knows with certainty that he himself exists. He also knows that bare nothing cannot produce real being. Hence if there is real being,—and man knows that *he* is real being,—there must have been something to produce it. Moreover, that which owes its being and beginning to another being must have everything it has from the being that made it. The eternal source of all being, then, must be the source and original of all power, hence it must be all-powerful, and, for the same reason, it must be all-intelligent. Unthinking matter cannot produce a thinking being. If God has made the knowing beings, he has also made the less excellent pieces of this universe, which establishes his omniscience, power, and providence. However we may conceive God, we cannot conceive him as material. But even if he were, he would still be God. Nor can matter be co-eternal with a co-eternal mind. If it be asked how we can conceive God making anything out of nothing, Locke points out that we cannot conceive how thought can produce motion, and yet we do not deny it.

In agreement with his general standpoint, Locke offers an empirical theory of ethics, which ends in an egoistic hedonism.

Ethics

There are no innate practical or moral truths, any more than there are such theoretical truths. We make moral judgments without having any rules "written on our hearts." Many men come to a knowledge of such rules, and are convinced of their obligation, in the same way in which they come to know other things. Others learn them from their education, environment, and the customs of their country. The fact is, we instil into the minds of children those doctrines which we would have them retain and profess; and our children, when they grow up, find these truths present in conscience and regard them imprinted by God and nature, and not taught by any one else. Conscience is nothing but our opinion of the rightness and wrongness of our own actions in the light of such acquired moral knowledge. "Morality is the relation of action to rules, the agreement or disagreement of voluntary actions with some law."

The question arises, How did such moral laws ever come to be established, how has the knowledge of right and wrong been acquired? Pleasure and pain are the great teachers of morality, according to our empiricist. Nature has put into man a desire of happiness and an aversion to misery, and these are natural tendencies, or practical principles, which influence all our actions; but they are inclinations and not truths of the understanding. We call that good which is apt to cause pleasure in us, and evil that which is apt to cause pain. Every one constantly pursues happiness and desires what makes any part of it; it is this desire or uneasiness which determines the will. Happiness in its full extent is the utmost pleasure we are capable of, and misery the utmost pain. Now, certain modes of conduct produce public happiness and preserve society, and also benefit the agent himself. God has joined virtue and public happiness together and made the practice of virtue necessary to society. Men discover these forms of behavior, and accept them as rules of practice. Every one reaps advantage to himself from the observance of the moral rules and, therefore, recommends them.

But it would be vain for one intelligent being to set a rule to the actions of another if he did not have the power to reward obedience and punish disobedience by some good or evil that is not the natural consequence of the act itself. There would be no need of a law where the natural consequences of actions had sufficient motive force. The laws have rewards and punishments, pleasure and pain, annexed to them by the will and power of a law-giver, in order to determine the wills of men. There are three sorts of laws, divine laws, the civil law, and the law of opinion or reputation. The divine law is the law which God has set to the actions of men, whether promulgated to them by the light of nature or the voice of revelation. God has the power to enforce this law by rewards and punishments of infinite weight and duration in another life. Here we speak of duties and sins. The civil law is the rule set by the commonwealth, and is accompanied by legal rewards and punishments. Here we have the notion of crime and innocence. But the great majority of men govern themselves chiefly, if not solely, by the law of fashion or private censure. Commendation and disgrace are strong motives to men to accommodate themselves to the opinions and rules of

those with whom they converse. No man escapes the punishment of the dislike and censure of his fellows, who offends against the fashion and opinion of the company he keeps and would recommend himself to. Virtue is everywhere thought praiseworthy; and nothing else but that which has the allowance of public esteem is called virtue. It is with these laws or rules that men compare their actions, and call them good or evil, according to their agreement or disagreement with them. The true sanction, however, of virtue, is the will of God; the will and law of God is the only touchstone of morality.

In the main, virtues and vices are everywhere the same, and correspond with the unchangeable rule of right and wrong which the law of God has established. Obedience to the laws of God secures and advances the general good of mankind; therefore rational human beings, having a care for their own interest, could not fail to commend the right and blame the wrong.

This is the old Greek hedonistic interpretation of morality, supplemented by a narrow conception of Christian theology. Virtue is nothing else but doing of good either to oneself or others. The most lasting pleasures in life consist in health, reputation, knowledge, doing good, and the expectation of eternal and incomprehensible happiness in another world.

Locke shows how we derive our moral knowledge from experience. We may, however, he thinks, reach it by reasoning from certain first principles, by demonstration. Morality is capable of demonstration as well as mathematics. "The idea of a supreme Being, infinite in power, goodness, and wisdom, whose workmanship we are, and on whom we depend; and the idea of ourselves, as understanding, rational beings, would, I suppose, if duly considered and pursued, afford such foundations of our duty and rules of action as might place morality among the sciences capable of demonstration." "Where there is no property there is no injustice, is a proposition as certain as any demonstration in Euclid." "Again: no government allows absolute liberty; the idea of government being the establishment of certain rules or laws which require conformity to them, and the idea of absolute liberty being for any one to do whatever he pleases, I am as capable of being certain of the truth of this proposition as of any in mathematics."

In other words, we have an empirical knowledge of right and wrong, a demonstrative knowledge, and a revealed knowledge, all of which agree. God has so arranged it that, given a desire of happiness, man will evolve a moral code. He has also endowed him with reason which will enable him to acquire moral truth by demonstration. And in the Scriptures he has revealed the same laws which can be reached by experience and reason.

Free Will

According to Locke freedom is not an idea belonging to volition or preferring, but to the person having the power of doing or forbearing to do, according as the mind shall choose or direct. We cannot say a man's will is free, "it is as insignificant to ask whether a man's will be free, as to ask whether his sleep be swift or his virtue square." The will is one power or ability, namely, the power of an agent to think his own actions and to prefer their doing or omission. Freedom is another power or ability, the power to do or forbear doing any particular action according as he himself wills. So that when we ask, Is the will free? we are really asking, Has one power another power? which is an absurdity. It is to ask, Is the will a substance, an agent? The will is not a faculty or substance. A man is free so far as he has power to think or not to think, to move or not to move according to the preference or direction of his own mind. Wherever he has not the power to do or forbear any act according to the determination or thought of the mind, he is not free though perhaps his act may be voluntary. It is some pressing uneasiness that successively determines the will and sets us upon those actions we perform. This uneasiness is desire, it is an uneasiness of the mind for want of some absent good. God has put into men the uneasiness of hunger and thirst and other natural desires, to move and determine their wills for the preservation of themselves and the continuation of the species. The most pressing uneasiness naturally determines the will. But what moves desire? Happiness alone.

Locke's theory of the State is presented in his *Two Treatises on Government,* the first of which is a refutation of Sir Robert Filmer's (died 1653) absolutistic work, *Patriarcha.** In the second he discusses "the true original, extent, and end of civil

* Patriarchal authority is a divine unalterable right of sovereignty, inherited from Adam. Algernon Sidney (1622-1683) refutes Filmer's Biblical

government." He opposes the view that all government is absolute monarchy, that kings have a divine right to absolute power, and that mankind has no right to natural freedom and equality. Men are naturally in a state of perfect freedom to order their actions and dispose of their possessions as they think fit, within the bounds of the law of nature, without asking leave, or depending on the will, of any other man. They are also in a state of equality of nature, no man having more power and jurisdiction than another. The law of nature or reason teaches all mankind that, being all equal and independent, no one ought to harm another in his life, liberty, and possessions.* Every one is bound to preserve himself and to preserve the rest of mankind when his own preservation comes not in competition. And in a state of nature every one has a power to punish transgressions of that law of nature, to preserve the innocent, to restrain offenders, and to take reparation for injuries done him. Each transgression may be punished to that degree, and with so much severity, as will suffice to make it an ill bargain to the offender, give him cause to repent, and terrify others from doing the like.

Politics

The state of nature is not (as Hobbes supposed) a state of war, but a state of peace, good-will, and mutual assistance. God made man so that convenience and inclination drove him into society, and fitted him with understanding and language to continue and enjoy it. But many things are wanting in a state of nature: an established, settled, known law; a known and impartial judge with authority; power to back and support the sentence, when right, and give it due execution. We have political or civil society whenever any number of men are so united into one society as to quit every one his executive power of the law of nature, and to resign it to the public: whenever men enter into society to make one people, one body politic, under one supreme government (contract theory).

proofs in his *Discourse on Government*. The poet Milton (1608-1674) demands domestic, ecclesiastical, and political liberty. Barclay is the great champion of the absolute monarchy. Locke largely bases himself on the principles already laid down in Richard Hooker's *Laws of Ecclesiastical Polity*, 1593.

* Locke drafted (1669) the first constitution for the Carolinas, which King Charles II had bestowed upon a number of noblemen, among them Locke's patron, the Earl of Shaftesbury.

Hence, absolute monarchy is inconsistent with civil society. For if the prince holds both the legislative and executive powers, there is no common judge who may fairly, indifferently, and with authority decide, and no standing rule to appeal to; the subject is the slave of one man. No one can be subjected to the political power of another without his own consent. When any number of men have, by consent of every individual, made a community, they have thereby made that community one body, with a power to act as one body, which is only by the will and determination of the majority. But after such a society has been formed, every man puts himself under an obligation to every one of that society to submit to the rule of the majority. Otherwise, there would be no compact if he were left free and under no other ties than he was before, in the state of nature. Unanimous consent is next to impossible. The governments of the world that were begun in peace were made by the consent of the people.

Man gives up his freedom and power, because the enjoyment of it is very uncertain and constantly exposed to the invasion of others; for all being kings as much as he, every man his equal, and the greater part no strict observers of equity and justice, the enjoyment of the property he has in this state is very unsafe and insecure. If it were not for the viciousness and corruption of degenerate men, there would be no need of any society but the state of nature. The great and chief end of men's uniting into a commonwealth is for the mutual preservation of their lives, liberties, and estates. Hence the power of society can never be supposed to extend farther than the common good.

The first and fundamental *natural* law, which is to govern even the legislative itself, is the preservation of the society and (so far as will consist with the public good) of every person in it. The first and fundamental *positive* law of all commonwealths is the establishing of the legislative power. This legislative is not only the supreme power, but sacred and unalterable in the hands where the community have once placed it; nor can any edict of anybody else have the force and obligation of a law, which has not the sanction from that legislative which the public has chosen and appointed. But the legislative power cannot be absolutely arbitrary over the lives and fortunes of the people,

it is limited to the public good of society. The laws of nature do not cease in society, they stand as an eternal rule to all men, legislators as well as others. Hence, it has no right to enslave, to destroy, or designedly to impoverish the subjects. Again, the legislative cannot assume to itself power to rule by extemporary arbitrary decrees; standing laws are needed. Further, the supreme power cannot take the subject's property without his consent; taxes can be levied only by consent of the majority. Lastly, it cannot delegate the power of making laws to any other hands.

It is not well that those who have powers of making the laws should also have power to execute them. The federative power is the power of war and peace, leagues and alliances, and all transactions with all persons and communities without the commonwealth. The federative and executive powers are almost always united, and it is best that they should be placed in one hand. The executive has the supreme execution of the laws, and should be exempt from subordination. But the legislative may take both the executive and federative powers out of the hands it has placed them in, when it finds cause, and to punish any maladministration of the laws. The legislative is the supreme power, but it is a fiduciary power to act for certain ends. So the people have a supreme power to remove and alter the legislative when they find it act contrary to the trust reposed in it. But whilst the government exists, the legislative is the supreme power. The power of choosing the legislative rests with the people. Not the prince, as Hobbes taught, but the legislative is the soul of the commonwealth, and the legislative represents the people; the people is the judge whether the prince or the legislative act contrary to their trust.

Like all the great philosophers of the modern era, Locke finds fault with the methods of instruction which had come down as a heritage from scholasticism, and presents a new program of education based on his empirical psychology and ethics. The soul being at birth devoid of all principles except the desire for pleasure and the power to receive impressions, the problem of education must be to learn by experience and to realize happiness. In order to solve it, a healthy body and sound sense-organs are requisite; by ex-

Education

ercise and habit the body must be hardened; hence, the need of physical training for the child and a frugal mode of life. The individuality of the child is to be developed in a natural manner; hence, private instruction is preferable. Locke also emphasizes the importance of object lessons, of learning by play, and of arousing the pupil's mental activities; study is to be made a delight. Above all, the social end of education should not be lost sight of: the youth is to be trained as a useful member of society.

49. Successors of Locke

Locke's teachings form the starting-point of many lines of thought, and his influence, like that of Descartes, extended far beyond his age and the boundaries of his country. The remark which Schiller once made of a great man applies to him: he had marrow in his bones to last for centuries. His *Essay* was the first attempt at a comprehensive theory of knowledge in the history of modern philosophy and inaugurated the movement which produced Berkeley and Hume and culminated in Kant. His empirical psychology became the source from which English associationism (Browne and Hartley) and French sensationalism (Condillac, Helvetius) drew their nourishment. His ethical philosophy was continued and corrected by the work of Shaftesbury, Hutcheson, Ferguson, Hume, and Adam Smith. His theory of education influenced the great French author Rousseau and, through him, the entire world. His political ideas found brilliant exponents in Voltaire, Montesquieu's *Esprit des lois,* and a radical continuation in Rousseau's *Contrat social;* while the spirit of his entire thought gave an impetus to the religious movement of the deists in England and in France. In Locke the forces that were making for enlightenment were concentrated and reflected more faithfully than in any thinker before him. He represents the spirit of the modern era, the spirit of independence and criticism, the spirit of individualism, and the spirit of democracy, the spirit which had sought utterance in the religious Reformation and in the political revolutions of the sixteenth and seventeenth centuries, and which reached its climax in the En-

Influence of Locke

lightenment of the eighteenth century. No philosopher has been more successful than he in impressing his thought on the minds and institutions of men.

Deism begins, as a vital movement, with Locke's book on the *Reasonableness of Christianity* (1695). Locke had set up reason as the ultimate test of revelation; revealed truths are absolutely certain, of that there is no doubt, but human reason is the criterion of revelation itself. With Herbert of Cherbury, the great empiricist accepted as true certain propositions of natural or rational theology; only, he did not regard them as innate. The deists apply these Lockian ideas, subjecting revelation to rational standards, and seek the true revelations of God in the laws of nature. On this basis, Christianity is fashioned into a rational religion; it is not mysterious, it is as old as creation. John Toland writes *Christianity not Mysterious* (1696), a book which was condemned by the Anglican Church. In his *Letters to Serena* (1704) and *Pantheisticon* (1720), he accepts a nature-religion, which he calls *pantheism* (a term coined by him). A. Collins writes his *Discourse of Free Thinking* (1713), in which he opposes the interference of the Church with critical discussions of the Bible. Other deistic works are: Tindal, *Christianity as Old as the Creation* (1730); Woolston, *Six Discourses on the Miracles of Our Savior* (1727-1730); Chubb, *The True Gospel of Jesus Christ* (1738); Morgan, *The Moral Philosopher* (1737). Conybeare (1732) and Joseph Butter (1736) defend revealed religion against deism.

Deists

Stephen, *History of English Thought in the Eighteenth Century,* 2 vols.; J. M. Robertson, *Short History of Free Thought,* 2 vols.; Lechler, *Geschichte des englischen Deismus.* See bibliography in *Britannica* under Deism.

In his account of the origin of knowledge, Locke distinguishes between sensation and reflection; he also endows the mind with certain powers or faculties which act on the materials of sense. The attempt is made by many of his followers to explain all mental processes, reflection as well as the faculties, as transformed sensations: reflection and the powers of the understanding are reduced to sensation. Peter

Psychology

Browne, Bishop of Cork (died 1735; *The Procedure, Extent, and Limits of the Understanding,* 1728), presents this view, which is worked out in detail by the French abbé, Étienne de Condillac (1715-1780) in his *Traité des sensations,* 1754. Condillac tries to show how a being endowed with but a single sense, —smell, for example,—would develop, in turn, attention, memory, comparison, pleasure and pain, passion, desire, will. From comparison, which is nothing but the multiplication of sensations, arise judgment, reflection, reasoning, and abstraction, that is, understanding. Reflection, or the ego, is simply the sum of the sensations which we now have and those which we have had. In order, however, to obtain the idea of an external world, *i.e.,* extension, form, solidity, and body, the sense of touch is needed. This yields us knowledge of objective reality,—there is something other than ourselves,—but what the nature of this other is, we do not know.

Sensationalism, in some form or other, became popular in England and in France, among its followers being: Hartley, Priestley, Erasmus Darwin, James Mill, J. Bentham, Helvetius, Condorcet, Volney, the Encyclopedists, and the materialists. Charles de Bonnet (1720-1793) teaches a moderate sensationalism, but regards all mental operations, the higher as well as the lower, as dependent on brain vibrations, which cause reactions in an immaterial soul. Helvetius applies sensationalism to ethics.

The law of the association of ideas (ideas are associated in the mind in a certain regular order), which had been noticed by Aristotle and Hobbes and discussed by Locke and Gay, was elaborated and formulated into a philosophical system by David Hartley (1705-1757; *Observations on Man, his Frame, his Duties, his Expectations,* 1749). This law, combined with the doctrine that all our ideas are copies of sensations, has been employed as the chief principle of explanation of mental life by the followers of empiricism,—by Hume, Condillac, Priestley, the Mills, Bentham, and many modern psychologists. In ethics, it has been used to account for the moral sentiments: Man learns to associate his pleasures with that which pleases him; the moral sentiments procure for us many advantages which we love, and we gradually transfer our affections from these to the things

which procure them, and in this way come to love virtue for virtue's sake.

Cf. works mentioned pp. 254, f., and under Locke; also, Bower, *Hartley and James Mill;* Schoenlank, *Hartley und Priestley: die Begründer des Associationismus;* Markus, *Die Associationstheorien.* Bibliography in Ueberweg-Heinze, Part III, vol. I, § 22.

Ethics

English empiricism derived the knowledge of right and wrong from experience and based morality on the impulse of self-preservation or the desire for happiness. Bacon, it is true, had not overlooked the social instinct, but Hobbes and Locke conceived human nature as fundamentally egoistic and made morality a matter of enlightened self-interest. Rationalistic thinkers like Cudworth, Clarke, and Wollaston protested against such empirical and egoistic conceptions; to deny that I should do for another what he in the like case should do for me, Clarke said, "is as if a man should contend that though two and three are equal to five, they are not equal to two and three." Richard Cumberland (1632-1719; *De legibus naturæ,* 1672), who may be regarded as the founder of English Utilitarianism, refused to accept the rationalistic doctrine of innate moral knowledge, but he regarded the egoistic conception of man, as a mere bundle of selfish impulses, as false: man has sympathetic feelings, or benevolence, as well as selfish feelings. Social life or the common welfare is the highest good, and we are fitted for it by social feeling and rationality.

The English moralists succeeding Locke base our moral knowledge, in the main, on feeling or impulse instead of reason or innate ideas of right and wrong, but they regard these feelings as native endowments of human nature. According to Lord Shaftesbury (1671-1713; *Characteristics,* 1711), man possesses self-affections and social affections; virtue consists in the proper balance between the two; and the moral sense tells us whether they are in harmony or not. Francis Hutcheson (1694-1747) works out these ideas in systematic form in his *Inquiry into the Ideas of Beauty and Virtue,* 1725, and *System of Moral Philosophy,* 1755, and is the first to make use of the formula: "the greatest happiness for the greatest number." To the same school belong: David Hume (*Inquiry concerning the Prin-*

ciples of Morals, 1751), Adam Ferguson (*Institutes of Moral Philosophy,* 1769), and Adam Smith (1723-1790), the author of *Theory of the Moral Sentiments,* 1759, and *Wealth of Nations,* 1776, who finds the source and criterion of the moral law in sympathy. All these writers do justice to the feeling-impulse side of man's nature: our ethical judgments and actions are rooted, not in reason, but in feeling. Most of them are intuitionists: either a native *moral sense* distinguishes between the worth of motives and acts, or the moral judgment is based on the feeling of sympathy. All of them regard the general welfare as the highest good, which Cumberland and Shaftesbury conceive as perfection, and the others as happiness, though the distinction between perfection and happiness is not, as yet, clearly drawn.

Joseph Butler (1692-1752; *Sermons upon Human Nature,* 1726, *Dissertation upon Virtue, Analogy of Religion,* 1736) follows this school in its general teaching, but lays greater emphasis on the conscience, which he conceives not as a feeling (moral sense), but as a principle of reflection: "There is a superior principle of reflection or conscience in every man, which distinguishes between the internal principles of his heart as well as his external actions; which passes judgment upon himself and them, and pronounces determinately some actions to be in themselves just, right, good, others to be in themselves evil, wrong, unjust: which, without being consulted, without being advised with, magisterially exerts itself, and approves or condemns him the doer of them accordingly." Had it strength as it had right, it would absolutely govern the world. He also finds in individual happiness the ultimate rational standard, though not the psychological motive of right and wrong. Conscience or duty and self-love or interest, if we understand our true happiness, always lead us the same way; they are perfectly coincident, for the most part in this world, but entirely and in every instance if we take in the future and the whole. Our ideas of happiness and misery are the nearest and most important to us; they will and ought to prevail over those of order and beauty and harmony and proportion, if there ever should be, as it is impossible there ever should be, any inconsistency between them. When we sit down in a cool hour, we can neither justify to ourselves the pursuit of what is right and good, as such, or any other pursuit,

till we are convinced that it will be for our happiness, or at least not contrary to it.

William Paley, in his *Principles of Moral and Political Philosophy,* 1785, rejects the moral sense, and declares that actions are to be estimated according to their tendency. Whatever is expedient is right. "Virtue is the doing good to mankind, in obedience to the will of God, and for the sake of everlasting happiness."

In opposition to Shaftesbury, Bernard Mandeville (1670-1733; *The Grumbling Hive: or Knaves Turned Honest,* 1705, *The Fable of the Bees: or Private Vices Public Benefits,* 1714) tries to show that selfishness (private vices) contributes more to the public good than benevolence. The Frenchman Helvetius (1715-1771; *De l'esprit,* 1758, *De l'homme,* 1772) follows Hobbes and Mandeville in making egoism the sole motive of human action, and enlightened self-interest the criterion of morals. The only way to make a man moral is to make him see his own welfare in the public welfare, and this can be done by legislation only, *i.e.,* by proper rewards and punishments. The science of morals is nothing but the science of legislation. This theory is, after all, the Lockian theory stripped of its theological additions.

This individualistic view, which is found in Locke and Paley, and also affects Butler's theory, is reflected in the economic theories of the French physiocrats (François Quesnay, 1694-1774; A. Turgot, 1727-1781) and in Adam Smith's *Wealth of Nations;* all of these oppose the old mercantile system which sprang up in Europe at the close of the Middle Ages. The new political economy is based on the idea that the individual has a natural right to exercise his activity in the economic sphere with the least possible interference from society (*laisser faire*). The assumption is that with unrestricted competition, the removal of unnatural restraints (among them monopolies or privileges), the freedom of exchange, the security of contract and property, enlightened self-interest will succeed in realizing not only the good of the individual, but also the public welfare. The conception of *laisser faire* is an expression of the general theory of natural rights and demands an open road for the individual in the pursuit of life, liberty, and happiness, holding that this will lead to social

Political Economy

justice: "the simple and obvious system of natural liberty establishes itself of its own accord" (A. Smith). The theory rendered service in helping to discredit and overthrow the old system and to deliver the individual from harmful restraints.

See works mentioned pp. 254, f., especially the histories of ethics and politics; also: ed. of Shaftesbury's *Characteristics* by J. M. Robertson; Fowler, *Shaftesbury and Hutcheson;* Gizicki, *Philosophie Shaftesburys;* Rand, *Life, Letters and Philosophical Regimen of Shaftesbury;* ed. of Butler's works by Gladstone; Collins, *Butler;* Farrer, *A. Smith.*

50. George Berkeley

The Problem

Bodies, according to Locke, produce sensations in the mind, sensations or ideas of extension, solidity, motion, color, sound, taste, smell, touch. Some of these are copies of things as they are, or primary qualities, others are the effects on us of powers in things, but not exact representations. Sensations furnish the materials of the mind, the alphabet of all our knowledge. The soul acts on them, arranging, uniting, separating, and relating them; and also reflects on its own operations. All our knowledge, therefore, is confined to the facts of experience; we have a direct knowledge only of our ideas. We also know that there is an external world, but this knowledge is not so self-evident as the knowledge of our own ideas.

Bishop Berkeley makes use of the basal teaching of Locke in order to refute materialism and atheism. If the basis of our knowledge is sensation and reflection, and we know only ideas, how can we know a world of bodies, a material world without us? We are limited, so far as matter is concerned, to our states of consciousness; we cannot compare our ideas with these corporeal substances; we do not know what they are or that they are. If there is matter and the Lockian theory is true, we cannot know it; we become entangled in skepticism. Besides, if there is an independent substance like matter and a world of pure space, then there is an infinite, eternal immutable reality existing alongside of God and limiting God, yes, even suggesting the non-existence of God. The belief in matter, therefore, leads to atheism and materialism. The grounds of skepticism, atheism, and irreligion lie in the view that matter or a world of bodies exists. We can avoid these irreligious consequences only by

getting rid of the premise from which they spring: the assertion that matter exists. We can explain the universe without such a premise: given God, the supreme Spirit, and other spiritual beings, we can account for all the facts. The paramount question for Berkeley, therefore, is, Does a world exist without mind, is there an independent world of matter?

George Berkeley (1685-1753), born in Ireland, studied at Trinity College, Dublin, traveled, and became Bishop of Cloyne in 1734. In 1732 he was sent to Rhode Island to establish missions. Among his works are: *An Essay towards a New Theory of Vision,* 1709, *A Treatise concerning the Principles of Human Knowledge,* 1710, *Three Dialogues between Hylas and Philonous,* 1713, *Alciphron, or the Minute Philosopher,* 1732.

Works edited by A. C. Fraser, 4 vols., 2d ed.; *Selections from Berkeley,* by Fraser. Fraser, *Berkeley,* and *Berkeley, Spiritual Realism;* Simon, *Universal Immaterialism;* Gourg, *Le journal philos. de Berkeley* (Commonplace Book).

Objects of Knowledge

It is a mistake, says Berkeley, to hold that our ignorance is due to the limitations of our human faculties; Providence usually furnishes the appetites it may have implanted in creatures with the means of satisfying them, if these appetites are rightly made use of. Hence, it is to be supposed that the desire for knowledge can be satisfied by a proper use of our faculties, and that we can deduce from true principles tenable deductions. It is well deserving our pains, therefore, to make a strict inquiry concerning the Principles of Human Knowledge, to sift and examine them on all sides.

The chief cause of the opinion that external objects (houses, mountains, rivers) have a natural or real existence, distinct from being perceived, is the doctrine that the mind can frame abstract ideas. This, however, is not the case. We can imagine, or represent to ourselves, the ideas of the particular things we have perceived, and we can variously divide and compound them. But we cannot, for example, find in our thoughts an idea corresponding with the description of the general idea of a triangle, of a triangle that is " neither oblique nor rectangle, equilateral, equicrural, nor scalenon, but all and none of these at once." It is true, a man may consider a figure merely as triangular without attending to the particular qualities of the angles or re-

lations of the sides. So far he may abstract; but this will never prove that he can frame an abstract, general, inconsistent idea of a triangle. Similarly, we cannot frame the distinct idea of motion, distinct from the body moving, and which is neither swift nor slow, curvilinear nor rectilinear. There are general ideas, to be sure, in this sense: an idea which, considered in itself, is particular becomes general by being made to represent or stand for all other particular ideas of the same sort. We use one name or sign for all particular ideas of the same sort, and because we use one name, we come to believe there is one general or abstract idea corresponding to it. Such supposed abstract ideas are not needful for the communication nor for the enlargement of our knowledge.*

The idea of a world without the mind, that is, of a real world of matter, is such an abstract idea. We separate the sensible objects from their being perceived, we conceive of matter as existing unperceived. This is impossible. We cannot see or feel anything without an actual sensation of that thing, nor can we conceive any sensible thing or object, distinct from the sensation or perception of it.

With Locke, Berkeley agrees that the objects of human knowledge are either actually imprinted on the senses or such as are perceived by attending to the passions and operations of the mind; or, lastly, ideas formed by the help of memory and imagination. These ideas we compound, divide, or barely represent. Besides ideas there is likewise something which knows or perceives them, and exercises diverse operations,—as willing, imaging, remembering,—about them. This perceiving, acting being is mind, spirit, soul, myself. It is entirely distinct from my ideas, it is a thing wherein they exist or whereby they are perceived, for the existence of an idea consists in being perceived.

Now, everybody will grant that our thoughts and passions and the pictures of the imagination do not exist without the mind; they are all in the mind, their existence consists in their being perceived or known by the mind. The same thing, however, is true also of our sensations; here, too, existence means to be perceived: *esse* is *percipi*.

World of Bodies

* This nominalistic doctrine Berkeley modified in later years. See vol. II, *Alciphron*, pp. 436, ff.

When I say the table I write on exists, I mean that I can see and feel it. When I say it exists when I am out of the room, I mean that if I were in the room I might perceive it, or that some other mind actually does perceive it. To say things exist when no mind perceives them, is perfectly unintelligible. To exist means to be perceived, to be in the mind. Bodies, therefore, have no existence without a mind; their *being* consists in being perceived or known; so long as they are not perceived by me or do not exist in my mind or that of any other created spirit, they have no existence at all, or else exist in the mind of some eternal spirit. It is a contradiction in terms to say matter exists without the mind.

That this is so follows necessarily from the idea of the body as held by Locke. A body is a solid, extended, figured substance having the power of motion, possessing a certain color, weight, taste, smell, and sound. Certain of its qualities, however, do not inhere in it; color, sound, taste, smell are the effects of the body produced in a perceiving subject, they are not qualities of the body itself, but *in me;* we call them secondary qualities. Extension, figure, solidity, motion, rest are said to be qualities inherent in the substance, body, itself; they are the primary qualities. But, says Berkeley, these so-called *primary* qualities are just as secondary as the others. The ideas of extension and solidity I get through the sense of touch; they are sensations in my mind also. I cannot separate my idea of extension from the idea of color and other secondary qualities; I never perceive an extended thing which is not at the same time colored, and so on. The primary qualities are inseparably united with the secondary; I cannot abstract the latter and leave behind an extended solid substance, which is that and nothing else. I have no abstract idea in my mind of such a substance. But, it is said, there must be something outside which supports, or stands under, these qualities,—a substance. That, again, says Berkeley, is a mere abstraction; there is no meaning whatever in the words material substance. Even if it were possible for such a solid, figured, movable substance to exist without the mind, how could we know it? Moreover, all our ideas or sensations, or the things perceived, are inactive, they have no power to do

anything; hence extension, figure, motion, all of which are ideas, cannot be the cause of sensations.

But, you say, there must be some cause of the sensations or ideas in my mind. And so there is, and this cause must be an active substance. It cannot, however, be a material substance, for there is none such, hence it must be an incorporeal, active substance or Spirit. A spirit is one, undivided, active being,—as it perceives ideas, it is called *understanding;* as it produces or otherwise operates about them, it is called *will.* There can be no *idea* formed of soul or spirit, because all ideas are passive and inert, hence we can have no idea or image or likeness of that which acts. We cannot *perceive* the spirit itself, but only the effects which it produces. Still, we have some *notion* of soul or spirit and the operations of the mind, such as willing, loving, hating, inasmuch as we understand the meaning of these words.

World of Spirits

Some ideas I can make and unmake at pleasure; in this respect my mind is active, I have power over my own thoughts. But my *sensations* I have no such power over. I open my eyes: it is not in my power to choose whether I shall see or no, or to determine what particular objects shall present themselves to my view. The ideas imprinted on my senses are not creatures of my will. Hence, there is some other Will or Spirit that produces them. The ideas of sense are more strong, lively, and distinct than those of the imagination; they have likewise a steadiness, order, and coherence and are not excited at random, as those which are the effects of human will often are, but in a regular train or series, the admissible connection whereof sufficiently testifies the wisdom and benevolence of its Author. Now, the set rules or established methods wherein the Mind we depend on excites in us the ideas of sense, are called the *laws of nature;* and these we learn by experience, which teaches us that such and such ideas are attended with such and such other ideas in the ordinary course of things. God, in other words, arouses in us certain ideas in a certain order; he has connected with the idea of food the idea of nourishment; with the idea of sleep, the idea of refreshment; with the visual sensation of fire, the bodily sensation of warmth. If there were no such regular order in our sensations, we would be eternally at a loss,

we would not know what to do: that there is such regularity in the flow of our sensations enables us to regulate our actions for the benefit of life. We notice this connection between our ideas and erroneously come to believe that the ideas cause each other, that fire produces warmth, that sleep causes refreshment, that collision of bodies causes sound. The ideas imprinted on the senses by God are called *real things;* and those excited in the imagination, being less regular, vivid, and constant, are more properly termed *ideas* or *images of things* which they copy or represent. But our sensations are ideas, nevertheless; they exist in the mind; they are simply more vivid, strong, orderly, and coherent ideas than our images; they are also less dependent on the thinking substance which perceives them, for they are excited by the will of another more powerful Spirit.

What, however, becomes of the sun, moon, stars, the houses, mountains, rivers, trees, and stones, on this hypothesis? Are they but chimeras or illusions of the fancy? Not at all, says our idealist. They exist in the sense given above, they are real things in the sense that God arouses these sensations in us in a regular coherent order. Material substance, too, is real in this sense, if we mean by it a combination of sensible qualities, such as extension, solidity, weight, and the like. If we mean by it a support of accidents or qualities without the mind, it does not exist even in the imagination. But does this not mean that we eat and drink ideas, and are clothed with ideas? We eat and drink and are clad with the immediate objects of sense, which cannot exist unperceived or without the mind. It is more proper, therefore, to call them *things* rather than ideas. But, we see things without us at a distance. The consideration of this difficulty gave birth to the *Essay towards a New Theory of Vision,* in which Berkeley holds that distance, or outness, is not immediately perceived by sight, nor yet apprehended or judged of by lines and angles, or anything that has a necessary connection with it. Ideas of sight or visual sensations come to suggest to us certain ideas of touch and ideas of locomotion. When the object seems indistinct and small, experience has taught us that it is far off, at a distance, that we must walk far to get a distinct and larger picture.

Objections Answered

But does not everything disappear when I close my eyes? The things are no longer perceived by me, hence they ought no longer to exist. Well, says Berkeley, the same difficulties would confront those who hold the other view. Do the colors and sounds disappear when I shut my eyes and ears? The particular bodies we see, all have color, sound, figure, size. If these disappear, what is left of the world? Besides, I may say that when I close my eyes the things are perceived by other minds.

Again, does not this idealism do away with the whole corpuscular philosophy? Berkeley answers, there is no phenomenon explained by that hypothesis which cannot be explained without it. No one really knows how matter operates on a spirit or produces any idea in it. Besides, the natural philosophers do not account for things by corporeal substance, but by figure, motion, and other qualities, which are, in truth, no more than mere ideas and cannot, therefore, be the cause of anything.

Still, would it not be absurd to speak in the language of this new theory, to say a spirit heats instead of fire heats? Berkeley replies: in such things we ought to think with the learned and speak with the vulgar. Those who accept the Copernican theory still speak of the sun rising. It is said, however, that the whole world believes in matter. Is the whole world mistaken? But, does the whole world really believe it? It is a contradiction to believe it. The truth is, men have no speculative opinion at all about it. Besides, universal consent is no proof. We can account for the prejudice. Men assumed that their sensations had an existence independent of the mind and without the mind, because they themselves were not the authors of them. They did not dream that a contradiction was involved in the terms. It was supposed that qualities existed without the mind and that, therefore, an unthinking substance was needed. Then it was held that secondary qualities had no extra-mental existence. Since, however, the primary qualities do not exist without the mind either, substance becomes unnecessary. If you say, perhaps there is a substance having qualities as incomprehensible to us as color is to a man born blind, we ask, What is the advantage of disputing about an unknown support of unknown qualities, about something we know not *what* and know not *why*? Besides, if we had a new sense to perceive these qualities,

we should have all the difficulties over again. If matter is defined as an unknown somewhat, neither substance nor attribute, spirit nor idea, as inert, thoughtless, indivisible, immovable, unextended, existing in no place, then it is nothing. If you distinguish it from nothing by giving it *existence, quiddity, entity,* I say this idea to me is incomprehensible trifling with words.

Spirits, then, are active indivisible substances; ideas are inert, fleeting, dependent things which subsist not by themselves, but are supported by or exist in minds or spiritual substances. We comprehend our own existence by inward feeling or reflection, and that of other spirits by reason. We may be said to have some knowledge or *notion* of our own minds, of spirits, and active beings, whereof, in a strict sense, we have no *ideas.* In like manner, we know and have a notion of relations between things or ideas,—which relations are distinct from the ideas or things related, inasmuch as the latter may be perceived by us without our perceiving the former. Berkeley holds that *ideas, spirits,* and *relations* are all in their respective kinds objects of human knowledge and subjects of discourse; and that the term idea will be improperly extended to signify everything we know or have any notion of. Ideas imprinted on the senses are real things, or do really exist, but they cannot subsist without the minds which perceive them; they are not resemblances of any archetype existing without the mind. They may be called *external* in the sense that they are not generated within the mind itself, but imprinted by a spirit distinct from that which perceives them. Sensible objects may also be said to be " without the mind " in the sense that when I shut my eyes the things still exist, but they must be in another mind.

Knowledge of Ideas, Spirits, and Relations

This idealistic theory, Berkeley declares, banishes from philosophy several obscure and difficult questions: Whether corporeal substances can think? Whether matter is infinitely divisible? How it operates on spirit? It reduces human knowledge to knowledge of *ideas* and knowledge of *spirits.* It gets rid of the dualism of *intelligible* objects, or objects in the mind, and *real* objects without the mind. This dualism is the root of skepticism, for how can we know that the things which are

Refutation of Dualism, Atheism, and Skepticism

perceived are conformable to the things which are not perceived? If color, figure, motion, extension, and the like are referred to things outside the mind, we see appearances only, not the real qualities of things, and are landed in skepticism; we distrust the senses. All doubt vanishes on our theory.

The doctrine of matter is also the cause of atheism; give it up and the whole fabric falls to the ground. If the self-existent, stupid, unthinking substance is the root and origin of all things, we exclude freedom, intelligence, and design from the formation of things. Give up matter and your Epicureans, Hobbists, and the like have not even the shadow of a pretense. Idolatry, too, falls with matter, for if objects of sense are merely so many sensations in the mind, then men cannot fall down and worship their own ideas. Also, take away material substance and mean by body what every plain ordinary person means by the word: to wit, that which is immediately seen and felt, which is only a combination of qualities or ideas, and then objections to resurrection came to nothing.

Another source of error is the doctrine of the *abstract ideas.* Time, place, and motion, taken in particular or concrete, are what everybody knows; but having passed through the hands of a metaphysician, they become too abstract and fine to be apprehended by men of ordinary sense. Time is nothing abstracted from the succession of ideas in our minds, hence the duration of any finite spirit must be estimated by the number of ideas or actions succeeding each other in the same spirit or mind. Hence, it is a plain consequence that the soul always thinks. Also, where extension is, there is color also, *i.e.,* in the mind; their archetypes can exist only in some other mind, and the objects of sense are nothing but those sensations combined, blended, concreted together; none of all which can be supposed to exist unperceived. We cannot frame an idea of pure space exclusive of all body. Pure space means the possibility of limbs of my body to be moved on all sides without the least resistance.

The skeptics triumph in natural philosophy. They say we do not know the real essence, the internal qualities and constitution of things. Something there is in every drop of water, every grain of sand, which it is beyond the power of human

understanding to fathom or comprehend. The complaint is groundless. There is no inward essence of things whence their discernible qualities flow or whereon they depend. It is also a vain labor to endeavor to explain appearances or qualities, the production of color and sound, for example, by the figure, motion, weight, and such like qualities of insensible particles. There is no other agent or efficient cause than *spirit;* motion as well as all other ideas is perfectly inert.

The great principle now in vogue is attraction. The word does not mean anything but the effect itself; it does not tell us anything as to the manner of the actions whereby it is produced or the cause which produces it. Many pronounce gravitation universal: to attract and to be attracted by every other body is said to be an essential quality inherent in all bodies. There is nothing necessary or essential in the case, but it depends entirely upon the Will of the Governing Spirit, who causes certain bodies to cleave together or tend towards each other, according to various laws. Hence, it is vain to inquire into natural efficient cause distinct from mind or spirit. The whole creation is the workmanship of a wise and good Agent, hence philosophers should concern their thoughts about the final causes of things. One good way is to point out the various ends to which things are adapted, and for which they were originally contrived. There is no reason why observations and experiments should not be made. That they are of use to mankind and enable us to draw general conclusions, is not the result of any immutable habitudes or relations between things themselves, but only of God's goodness and kindness to men in the administration of the world. By a diligent observation of phenomena within our view, we may discover the general laws of nature, and from them deduce the other phenomena; " I do not say *demonstrate,* for all deductions of that kind depend on the supposition that the Author of Nature always operates uniformly and in a constant observance of those rules we take for principles: which we cannot evidently know." The rules of morality, however, which have a necessary tendency to promote the well-being of mankind, Berkeley thinks can be demonstrated, and have the same immutable, eternal truth with the propositions of geometry.

Arthur Collier, in his *Clavis universalis,* 1713, making Malebranche's system his starting-point, attempts to prove the non-existence of an external world from the standpoint of rationalism. *Clavis* ed. by Bowman. Cf. Lyon, *Un idéaliste anglais, Rev. phil.,* 1880; Kowalewski, *Kritische Analyze von Arthur Colliers Clavis universalis.*

51. David Hume

The Problem

Locke taught that we have certain knowledge of our ideas, demonstrative knowledge of God and of morality, and practically certain knowledge of the external world of bodies. Berkeley denied the existence of a material world and limited our knowledge to ideas, relations, and spiritual beings. David Hume accepts the empirical theory of the origin of knowledge and the Berkeleyan view that *esse* = *percipi,* and draws what seem to him the consequences of these premises. If all we can know is our own impressions, we have no right to assert the reality either of material substances or of spiritual substances. We find no impressions that justify the assumption of *any kind* of substance. And we discover nothing in our experience that justifies our notion of necessary connection or causation; cause and effect can mean nothing more than a regular succession of ideas. Metaphysics, theology, and natural science cannot yield universal and necessary knowledge; the sciences of God, the universe, and the soul are just as impossible, as rational sciences, as Locke had declared the science of bodies to be. We can know only what we experience, and we can reach only probability in the field to which we are confined. Hume agrees with Descartes, Hobbes, and Locke in the view that genuine knowledge must be self-evident, but he finds no such knowledge anywhere except in mathematics, which merely analyzes its own concepts.

Hume's view is empiricism: our knowledge has its source in experience; it is positivism: our knowledge is limited to the world of phenomena; it is agnosticism: we know nothing of ultimates, substances, causes, soul, ego, external world, universe; it is humanism: the human-mental world is the only real subject of our study.

David Hume, born in Edinburgh, 1711, studied law, served as secretary to General St. Clair and later to Lord Hertford (1763-1766),

became librarian to the Faculty of Law in Edinburgh (1752-1757), and Under-Secretary of State (1767-1769). He wrote his chief work, *Treatise upon Human Nature,* in three books, during his first residence in France (1734-1737), but the work made no impression upon the public: it "fell dead-born from the press," as Hume says. He afterwards worked it over, in more popular form, and published the three revised parts separately (1748, 1751, 1757). But his fame during his lifetime rested upon his achievements as a historian rather than on his philosophical works. During his second sojourn at Paris, as a member of the English embassy, he made the acquaintance of Rousseau, Diderot, Holbach, Turgot, and d'Alembert, and induced Rousseau to visit England. He died in 1776.

Among his works we mention: *Treatise upon Human Nature* (1739-1740); five volumes of *Essays:* 1. *Essays, Moral, Political and Literary,* 1741-1742; 2. *Inquiry concerning Human Understanding,* 1748 (a revision of Book I of the *Treatise*); 3. *Inquiry concerning the Principles of Morals,* 1751 (revision of Book III); 4. *Political Discourses,* 1752; 5. *Four Dissertations,* 1757, including *A Dissertation on the Passions* (Book II of the *Treatise*) and *Natural History of Religion.* Posthumous works: *My Own Life* (published by Adam Smith), 1777, *Dialogues concerning Natural Religion,* 1779, *Suicide* and *Immortality of the Soul,* 1783. His *History of England* appeared 1754-1762.

Works ed. by Green and Grose, 4 vols., 1874, new ed., 1909; *Essays* and *Principles of Morals* by Selby-Bigge, 1894; *Letters* by Birkbeck Hill, 1888; Selections from *Treatise* by Aikins, from ethical writings by Hyslop.

Monographs by Huxley, Knight, Calderwood, Fraser; Green, *Introduction to Hume's Works,* also in Green's works; Elkin, *Hume's Treatise and Inquiry;* Jodl, *Leben und Philosophie Humes;* E. Pfleiderer, *Empirismus und Skepsis in Humes Philosophie;* Spicker, *Kant, Hume, und Berkeley;* Meinong, *Hume-Studien,* 2 vols.; Gizicki, *Ethik Humes;* Hedvall, *Humes Erkenntnisstheorie;* Lechartier, *Hume: moraliste et sociologue.* See also McCosh, *Scottish Philosophy,* Pringle-Pattison, *On the Scottish Philosophy,* and the works on English philosophy mentioned pp. 254, f.

Science of Human Nature

All sciences, says Hume, have a relation to human nature. The sole end of *logic* is to explain the principles and operations of our reasoning faculty and the nature of our ideas; *morals* and *criticism* regard our tastes and sentiments; and *politics* consider men as united in society and dependent on each other. Even mathematics, natural philosophy, and natural religion are judged by the powers and faculties of men. Hence, we ought to study human nature itself, in order to find the principles which regulate our understanding, excite our sentiments, and make us praise or blame any particular object, action, or behavior. What,

we ask, is the source of our distinctions between truth and falsehood, vice and virtue, beauty and deformity. The science of man, or moral philosophy, as Hume calls it, is the only solid foundation we can give to the other sciences, and this science of man must be laid in experience and observation; the "experimental method of reasoning" must be introduced into philosophy. Hume attempts this task in his *Treatise upon Human Nature,* of which Book I treats of the Understanding, Book II of the Passions, and Book III of Morals. The same subjects are discussed in the *Inquiry concerning Human Understanding, Dissertation on the Passions,* and *Inquiry concerning the Principles of Morals.*

The most important task is to inquire into the nature of the human understanding, to analyze its powers and capacities, to show that it is not fitted for the abstruse and remote subjects which traditional philosophy has set before it; in other words, we must cultivate true metaphysics, the science of the understanding, in order to destroy the false and adulterate kind which attempts to penetrate into realms inaccessible to the intellect. Even if we could do no more than offer a mental geography, as it were, a delineation of the distinct parts and powers of the mind, there ought to be, to say the least, as much satisfaction in that as in studying the system of the planets. But why may we not hope to discover the secret springs and principles by which the mind is actuated in its operations, that a Newton of the mind may arise who may perhaps discover a universal and general principle of the mind?

The chief problems that occupy Hume are those of the origin and nature of knowledge. What is the source of our knowledge; what are its certainty, extent, and limitations? What value have certain forms of knowing, or certain categories, such as substance and causality? The answers to all these questions are based on the answer which Hume gives to the question of the origin of knowledge. All the materials of our thinking are derived from outward and inward impressions. *Impressions* are our more lively perceptions, when we hear or see or feel or love or hate or desire or will: that is, all our sensations, passions, and emotions as they make their first appearance in the soul. All our thoughts or *ideas* are copies

Origin of Knowledge

of such impressions: they are the less lively perceptions, the faint or feeble impressions; of which we are conscious when we reflect on any of the sensations or movements mentioned. Outward impressions, or sensations, arise in the soul from unknown causes, while the inward impressions are derived, in a great measure, from our ideas: *e.g.*, an impression strikes upon the senses, we perceive heat or cold, pleasure or pain. A copy remains of the impression, that is an idea. This idea of pleasure or pain produces new impressions: desire and aversion, hope and fear, which are impressions of reflection. These, again, are copied by the memory and imagination. Out of these impressions knowledge is built up by compounding, transposing, augmenting, or diminishing the materials furnished us by the senses and experience. The mixture and composition of the impressions belongs alone to the mind and will. Analysis shows that every idea which we examine is copied from similar impressions. Moreover, where there are no impressions, there can be no ideas; a blind man can have no notion of colors, nor a deaf man of sounds. Hence, we should always ask ourselves in examining the meaning of philosophical terms: From what impression is the supposed idea derived?

Our thoughts or ideas, however, are not entirely loose and unconnected, not joined by chance; they introduce one another with a certain degree of method and regularity; there is a bond of union between them, one calls up another. A picture naturally leads our thoughts to the original (*resemblance*), the mention of one apartment in a house suggests an adjoining one (*contiguity*), the thought of a wound calls up the idea of pain (*cause and effect*). This is the phenomenon called *association of ideas.* The principles or laws of association are resemblance, contiguity in time and place, and cause and effect. Thoughts, in other words, tend to call up thoughts of like things, of things contiguous in time and place, and of things related as cause and effect. By the union or association of ideas according to these principles, all our complex ideas are formed.

All our reasonings concerning matters of fact are based on the relation of *cause and effect,* that is, we always seek a connection between a present fact and another. A man finds a watch in a desert island, he concludes from the product to the

cause, he infers that men have once been there. On our search for causes and effects depend our speculations and practice. It is, therefore, of cardinal importance that we study this relation. How do we arrive at the knowledge of cause and effect, and what is the validity of this knowledge, what is the nature of its evidence?

We do not reach a knowledge of this relation by reasonings *a priori*. Adam could not have inferred *a priori*, prior to experience, from the light and warmth of fire, that it would consume him. The mind cannot deduce the effect from the supposed cause; no amount of reasoning will enable us to discover *a priori* the explosion of gunpowder or the attraction of the loadstone. For the effect is totally different from the cause and can never be discovered in it. We cannot *demonstrate* that a certain cause must have a certain effect or that it must always have the same effect; we cannot prove to reason, as we can a mathematical proposition, that bread nourishes and fire warms. There is no necessary connection between the qualities of bread and nourishment, such that the notion of the one necessarily implies the other; if there were, we could, without experience, infer the effects from the first appearance of these qualities, just as we can conclude from the notion of a triangle that the sum of its angles is equal to two right angles. There is nothing logically contradictory in assuming that fire will not warm or bread nourish or gunpowder explode.

Our knowledge of the relation of cause and effect is based on observation and experience. We observe objects succeeding one another, that similar objects are constantly conjoined, that heat follows flame, cold snow, that the motion of one billiard ball is attended by the movement of the other. Having found, in many instances, that any two kinds of objects have always been conjoined, we infer that the objects are causally related, that one is the cause of the other. That is, we are led to expect upon the appearance of the one, the appearance of the other; the mind is carried by *habit* or *custom* to *believe* that the two objects in question are connected, that they will always go together. After the constant conjunction of two objects, heat and flame, weight and solidity, we are determined by custom to expect the one from the appearance of the other. Our expe-

rience of the constant conjunction of objects, in other words, produces a belief in their connection. This belief is an operation of the soul, a species of natural instinct, as unavoidable as to feel the passion of love when we receive benefits. We cannot define belief except as a feeling of which every one knows the meaning, because every man is conscious of it. (In the *Treatise* Hume is still uncertain as to the psychology of this belief. He identifies it with the imagination, but the matter seems obscure and unsatisfactory to him.) Nature, therefore, has not trusted the operation of the mind by which we infer like effects from like causes, and vice versa, to the fallacious deductions of reason, but has secured it by an instinct or mechanical tendency.

A cause may, therefore, be defined as an object followed by another and whose appearance always conveys the thought of that other. This definition, however, does not satisfy some metaphysicians, they miss something in it. For them a cause is something productive of another thing; there is something in the cause by which it is enabled to produce the effect, a secret power, force, or energy. There is a tie that binds the cause to the effect, a necessary connection between cause and effect, such that if we knew the power, we could foresee the effect even without experience, and might, at first, pronounce with certainty concerning it, by the mere dint of thought and reasoning. If this were true, we could deduce the effect from the cause; a knowledge of the cause would necessarily carry with it a knowledge of the effect: we should know at once, without any experience, how an object would act.

But what do these terms power, force, energy, necessary connection mean, and what right have we to employ them? To answer this question, we must analyze our idea of power or necessary connection. We cannot *think* of anything which we have not antecedently *felt* either by our external or internal senses. Now what is the *impression* on which this idea of power depends: how do we get it? When we look at external objects and consider the operation of causes, we never discover any power or necessary connection, any quality which binds the effect to the cause and renders the one an infallible consequence of the other. We only find that the one does actually follow the other. The impulse of one billiard ball is attended with motion in the sec-

ond; this is all that appears to the *outward* senses. From the first appearance of an object we can never conjecture what its effect will be. The force in the universe which actuates the whole machine is entirely concealed from us. We know that heat is a constant attendant upon flame, but what is the connection between them we cannot imagine. Nor do we get the idea of power from reflection on the operation of our own minds; it is not copied from any *internal* impression or experience. But, it may be said, are we not, every moment, conscious of internal power, do we not feel that by simple command of our will we can move the organs of the body or direct the faculties of the mind? An act of volition produces motion in our limbs or raises a new idea in our imagination. This influence of the will we know by consciousness. Hence we acquire the idea of power or energy; and we are certain that we ourselves and all other intelligent beings are possessed of power.

Let us examine this view, says Hume. It is true, we do influence the organs of the body by volition. But we are not conscious of the means by which this is effected; we are never, and never can be, directly conscious of the energy by which the will does this. The power is utterly concealed from us here, as in case of natural events. The motion of the body follows upon the command of the will, that is all experience tells us; how it is done is a mystery. Experience does not tell us the secret connection which binds the will and its act together and renders them inseparable. The whole relation between soul and body is mysterious; we do not know the connection of the cause with its effect here, we can never see the influence of mind on body from any apparent power or energy in the cause, which connects it with the effect and renders the one an infallible consequence of the other. It is equally impossible to know how our will controls our thinking, the power by which the soul produces ideas. We do not discover any such power; all we know is that the will commanded an idea and the event followed.

To sum up: We can never discover any power at all; all we see is one event following another. We cannot observe or conceive the tie that binds together the motion and the volition, or energy, by which the mind produces this effect. The same

is true of natural events. One event follows another; we never can observe a tie between them. They seem *conjoined* but never connected. We never experience such a tie, or power, or connection; we receive no *impression* of it, hence we can have no *idea* of it. Employed as they are, these words seem to be without a meaning. But they have a meaning when used in the proper sense: when we say an object is connected with another, we mean that they have acquired a connection in our thought. As was said before, the mind is carried by *habit,* upon the appearance of one event, to expect its usual attendant and to *believe* that it will exist. This connection, therefore, which we *feel* in the mind, this customary transition of the imagination from one object to its usual attendant, is the sentiment or impression from which we form the idea of power or necessary connection.

According to Hume, then, the objects are not necessarily connected, but the ideas are connected in our mind by association. The association is the result of repetition, of custom or habit. The ideas have gone together so often that when one appears, it suggests the other. We have here not logical but psychological necessity, and this psychological necessity depends on experience. The process is the same in animals, in children, among the generality of men and philosophers.

Another notion formed by philosophers is that of *substance.* We cannot forbear looking at colors, sounds, tastes, figures, and other properties of bodies as existences which cannot subsist apart, but require a subject of inhesion to sustain and support them. The imagination feigns something unknown and invisible which it supposes to continue the same under all variation. This unknown something is the substance; its qualities are called accidents. Philosophers also suppose occult qualities and substantial forms. But all these are fictions, they are like specters in the dark. We have no perfect idea of anything but a perception. A substance is entirely different from a perception. We have, therefore, no idea of a substance. Every quality, being a distinct thing from another, may be conceived to exist apart, and may exist apart, not only from every other quality but from that unintelligible chimera of a substance.

All our ideas or thoughts, then, are copies of impressions, all

knowledge is derived from experience. Now let us ask what is the validity of such knowledge, what is the nature of its evidence? All the objects of human reason may be divided into two kinds: *relations of ideas* and *matters of fact.* Of the first kind are the sciences of geometry, algebra, and arithmetic, and, in short, every affirmation which is either intuitively or demonstratively certain. That the square of the hypothenuse is equal to the square of the other two sides is a proposition which expresses a relation between these figures. That three times five is equal to half of thirty expresses a relation between these numbers. Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Even if there had never been a circle or a triangle in nature, the truths demonstrated by Euclid would forever retain their certainty and self-evidence.

Validity of Knowledge

All evidence of matters of fact which lies beyond the testimony of sense or memory is derived entirely from the relation of cause and effect. Our knowledge of causes and effects is derived from experience, as we saw: custom leads us to infer that objects which our experience tells us are frequently conjoined, will always be, but custom is an instinct and instinct may be fallacious. Our evidence of the truth of matters of fact is not like the evidence we have in mathematics. The contrary of every matter of fact is still possible, because it can never imply a contradiction. That the sun will not rise to-morrow is no less intelligible a proposition, and implies no more contradiction, than that it will rise. Here we are dealing not with certain, self-evident knowledge, but with probability.

Of substances we have no idea whatever, and they have no place in knowledge. But, it may be asked, why trust imagination in the case of causes and not in the case of substance? Hume's answer is that we must distinguish between principles which are permanent, irresistible, and universal, such as is the customary transition from causes to effects, and the principles which are changeable, weak, and irregular, such as substance, substantial forms, accidents, occult qualities. The former are the foundation of all our thought and action, so that, upon their removal, human nature must inevitably perish and go to ruin.

The latter are neither unavoidable to mankind nor necessary and useful in the conduct of life.

We have no absolute or self-evident or certain knowledge, therefore, of matters of fact; our knowledge never reaches absolute certainty. We base our conclusions on experience, we believe the future will be like the past, but we have no absolute assurance that things will not change. Life, however, would be impossible unless we acted on the belief that nature is regular and uniform; no practical good can come of our skepticism; practice is the best cure for all skeptical reflections.

The senses, however, alone are not implicitly to be depended on; we must correct their evidence by reason. We trust our senses by a natural instinct. We always suppose an external universe without any reasoning and almost before the use of reason. We assume it to exist even if every sensible creature were annihilated. The slightest philosophy, however, destroys the opinion of all men. Nothing can be present to the mind but an image or perception. We cannot prove that perceptions are caused by external objects entirely different from them, though resembling them (if possible). Experience is silent here, for all we have before the mind is perceptions. We observe a relation of cause and effect between two perceptions, but can never observe it between perceptions and objects, hence we cannot conclude from perceptions to objects as their causes. If we deprive matter of primary qualities as well as of secondary qualities, we leave only a certain unknown, inexplicable something as the cause of our impressions, a notion so imperfect that no skeptic will think it worth while to contend against it. We do not know whether there are things-in-themselves or not. The objects of all our knowledge are ideas of our own impressions. We cannot prove that these are caused by external objects or an unknown substance or by ourselves or by God. Sensations arise in the soul from unknown causes. All we can do, then, is to limit ourselves to the world of experience, to our impressions and ideas. We can compare our ideas, note their relations, and reason about the relations, thus attaining a kind of demonstrative knowledge. We can also observe the order of our sensations; through habit or custom we come to regard one object

Knowledge of the External World

as connected with another in a relation which we call cause and effect.

We must limit our inquiries to such subjects as are best adapted to the narrow capacities of the human understanding. Philosophical decisions are nothing but the reflections of common life methodized and corrected. Philosophers will never be tempted to go beyond common life, so long as they consider the imperfection of those faculties which they employ, their narrow reach, and their inaccurate operations. We can never form any satisfactory conclusions with regard to the origin of worlds and the situation of nature, from and to eternity.

Metaphysics, therefore, in the sense of knowledge of the ultimate origin and nature of the universe is impossible: rational cosmology is out of the question. Nor can we have a rational psychology, a science of the essence of the soul; we know nothing of an immaterial, indivisible, imperishable soul-substance. The idea of substance is meaningless, whether applied to matter or to mind. The doctrine of the simplicity and indivisibility of a thinking substance is a true atheism; if we accept it, Hume declares, we must embrace Spinozism. Nor have we, as some philosophers hold, any idea of a simple and identical self. There is no such simple and continued principle in me. "When I enter intimately upon what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never catch *myself*, at any time, without a perception, and never can observe anything but the perception." The mind is a bundle or collection of different perceptions which succeed one another with an inconceivable rapidity, and are in a perpetual flux and movement. The mind is a kind of theater where several perceptions successively make their appearance, pass, repass, glide away, and mingle in an infinite variety of postures and situations. There is properly no *simplicity* in it at one time, nor *identity* at different times. The comparison of the theater must not mislead us, however, we are told. They are successive perceptions only that constitute the mind; nor have we the most distant notion of the place where these scenes are represented, or of the materials of which it is composed. Every distinct perception is a distinct existence, and

Soul-Substance

is different and distinguishable and separable from every other perception either contemporary or successive. Is this relation of identity something that really binds our several perceptions together or only associates their ideas in the imagination? In pronouncing concerning the identity of a person, do we observe some real bonds among his perceptions or only feel one among the ideas we form of them? The understanding never observes any real connection among objects; even the union of cause and effect resolves itself into a customary association of ideas. Hence, identity is nothing really belonging to these different perceptions and uniting them together; but is merely a quality which we attribute to them because of the union of their ideas in the imagination, when we reflect on them. Mind is nothing but a heap or collection of different perceptions united together by certain relations, and supposed, though falsely, to be endowed with a perfect simplicity and identity.

Freedom and Necessity

The idea of necessity and causation arises entirely from the uniformity observable in the operations of nature. Where similar objects are constantly conjoined together, the mind is determined by custom to infer the one from the appearance of the other. Beyond the constant conjunction of similar objects and the consequent inference from one to the other, we have no notion of any necessity or connection. This idea of necessity is applied also to the voluntary actions of men. All mankind have always agreed on that; the disputes about liberty and necessity are due to misunderstandings which a few intelligible definitions would have ended. There is great uniformity in the actions of men; mankind is much the same in all times and places. The conjunction between motives and voluntary actions is as regular and uniform as that between cause and effect in any part of nature, and has been universally acknowledged among mankind. It seems almost impossible to engage either in science or action of any kind without acknowledging the doctrine of necessity and this inference from motives to voluntary actions, from characters to conduct. But why do men oppose this doctrine in words? It is because men have the false notion of necessity. They believe they perceive something like a necessary connection between cause and effect in nature, while they *feel* no such connection

between the motive and the action when they reflect on the operations of their own minds. Necessity, however, is not constraint, but uniformity of action, constant conjunction between motive and effect. Liberty is a power of acting or not acting according to the determinations of the will; that is, if we choose to remain at rest, we may, if we choose to move, we also may. A man may refuse to give the name necessity to this property of human actions, but so long as the meaning is understood the word can do no harm. The doctrine is innocent.

The doctrines of liberty and necessity, thus explained, are not only consistent with morality, but absolutely essential to its support. Necessity is the constant conjunction of like objects, or necessity is the inference of the understanding from one object to the other. We draw inferences from human actions; our inferences are based on the experienced union of like actions with like motives. If actions did not proceed from some cause in the character and disposition of the person who performed them, the person would not be answerable for them. But where liberty is wanting, human actions are not susceptible of any moral qualities, nor can they be objects of approbation or dislike. To be called moral, acts must spring from the internal character, passions, and affections of the person; in that sense they are free; where they are derived altogether from external objects, they can give rise neither to praise nor blame: they are not free.

We cannot demonstrate the independent existence of a world, though we continue to believe in it: rational cosmology is impossible. Nor can we demonstrate the existence of a soul-substance and the immortality of the soul: rational psychology is impossible. Finally, we cannot demonstrate anything concerning the nature of God, his attributes, his decrees, his plan of providence. Human reason is too weak, blind, and limited in its scope to solve such problems as these: rational theology is impossible. When the coherence of the parts of a stone or even that composition of parts which renders it extended; when these familiar objects are so inexplicable and contain circumstances so repugnant and contradictory; with what assurance can we decide concerning the origin of worlds or trace their history from eternity to eternity? We are far

God

beyond the reach of our faculties when we carry our speculations into two eternities, before and after the present state of things: into the creation and formation of the universe, the existence and properties of spirits, the powers and operations of one universal spirit existing without beginning and without end, omnipotent, omniscient, immutable, infinite, and incomprehensible.

The question is not concerning the being but the nature of God. No truth is so certain as the being of God; it is the ground of all our hopes, the surest foundation of morality, the firmest support of society. Nothing exists without a cause, and the original cause of this universe (whatever it be) we call God, and piously ascribe to him every species of perfection. But we cannot comprehend the attributes of this divine being nor suppose that his perfections have any analogy or likeness to the perfections of a human creature. Hume directs his attacks particularly against the *argument from design,* the so-called teleological proof, which attempts to infer the wisdom and goodness of God from the order, beauty, and goodness of the universe. Unless the cases be exactly similar, we cannot repose perfect confidence in reasoning by analogy here. There is a wide difference between the universe and houses, ships, furniture, and machines, and we are not justified in inferring similar causes from a slight similarity in effects. Intelligence, it is true, is an active cause by which some particular parts of nature, we find, produce alterations in other parts. But thought, design, intelligence, such as we discover in men and other animals, is no more than one of the springs and principles of the universe, as well as heat or cold, attraction or repulsion, and a hundred others which fall under daily observation. We cannot conclude with propriety from the part to the whole. But even if we could, what peculiar privilege has the little agitation in the brain which we call thought, that we must thus make it the model of the whole universe? Can we imagine that nature incessantly copies herself throughout so immense a universe? If we see a house, we conclude with the greatest certainty that it had an architect or builder,—because this is precisely that species of effect which we have experienced from that species of cause. But the universe bears no such resemblance to a house that we can with the same cer-

tainty infer a similar cause, or that the analogy is here entire and perfect. The dissimilitude is so striking that the utmost you can here pretend to is a guess, a conjecture, a presumption concerning a similar cause.

We cannot represent the Deity as similar to a human mind: to do so would be to fall into anthropomorphism. The human mind is in constant change; this is not compatible with the perfect immutability and simplicity ascribed to the Deity. Besides, why not stop at the material world? To say the different ideas which compose the reason of the Supreme Being fall into order, of themselves, by their own nature, has no more meaning than to say that the parts of the material world fall into order, of themselves, and by their own nature. We have experience of matter doing this, and we have experience of mind doing it.

The attempt to infer the nature of God from the nature of the universe must end in disaster. By this anthropomorphic method of reasoning, we cannot ascribe infinity to the divine Being, because the effect is not infinite; nor perfection, because the universe is not perfect. Even if it were a perfect production, it would still remain uncertain whether all the excellencies of the work can justly be ascribed to the workman. Many worlds might have been botched and bungled, throughout an eternity, ere this system was struck out, much labor lost, many fruitless trials made, and a slow but continued improvement carried on during infinite ages in the art of world-making. Besides, there is no proof, on this argument, of the unity of the Deity; perhaps many gods united in making a world. Again, men are mortal and renew their species by generation, hence if we reason by analogy, why, then, must we exclude this universal circumstance from these deities? And why not complete our anthropomorphism and ascribe bodies to the Deity or deities?

A more probable hypothesis than the anthropomorphic theory, according to Hume, is that which infers that the world is an animal and the Deity the soul of the world, actuating it and actuated by it. The world itself plainly resembles more an animal or a vegetable than it does a watch or a knitting-loom. Its cause, therefore, it is more probable, resembles the cause of the former. The cause of the former is generation or vegetation.

The cause of the world, consequently, we may infer to be something similar to generation or vegetation.

It is true, these are world-fancies; we have no data to establish any system of cosmogony. Our experience is limited and imperfect, and can afford no possible conjecture concerning the whole of things. But the hypothesis which compares the world to an animal is as probable as the one which compares it with a human contrivance; indeed, the analogy is more striking in the former case than in the latter.

Hume also points out that we cannot conclude from the universe to a being possessing moral attributes like those of men. The purpose and intention of nature seems to be the preservation and propagation of the species, and not their happiness. Misery exceeds happiness in the world. The fact of pain in the world would prove that God is either not benevolent or not almighty. Physical and moral evil do not allow us to infer a good God. It may be said, human reason is too weak to understand the purpose of the universe; but this does not allow us to infer anything of God's goodness; a man must infer from what he knows, not from what he is ignorant of.

We cannot demonstrate *a priori* that the Deity is a necessarily existent being; there is no being whose non-existence implies a contradiction. We cannot prove his existence as a necessary consequence of his nature, because we do not know what that nature is. The material universe may, for all we know, have qualities which make its non-existence inconceivable.

As to the origin of religion, Hume holds that the belief in God is not the result of speculation, curiosity, or the pure love of truth, but rests on the anxious concern for happiness, the dread of future misery, the terror of death, the thirst for revenge, the appetite for food and other necessaries. Polytheism or idolatry, and not theism, must have been the first and most ancient religions.

In spite of these skeptical reflections, Hume declares that it hardly seems possible that any one of good understanding should reject the idea of God when once it is suggested to him. A purpose, an intention, a design, is evident in everything, and when our comprehension is so far enlarged as to contemplate the first rise of this visible system, we must adopt, with the

strongest conviction, the idea of some intelligent cause or author. The universal propensity to believe in invisible, intelligent power, if not an original instinct, being at least a general attendant of human nature, may be considered as a kind of mark or stamp which the divine Workman has set upon his work. How seriously these remarks are to be taken in view of what has been said before, the reader is left to decide for himself.

Theology is not a demonstrable science, we cannot prove the existence or the attributes of God. The teleological argument is imperfect; anthropomorphism, prejudice. Hume inclines to an *organic conception* of the universe, in this respect opposing the eighteenth-century ideal. His view of the origin of religion is also out of harmony with the eighteenth-century notions, according to which religion owes its origin either to the rational faculties of primitive men or is an invention of crafty priests. Hume rejects all such theories: the belief in God is not the result of speculative reasoning, but is based on man's emotional and impulsive nature. The intellectualistic or rationalistic explanation is set aside for the *voluntaristic* conception: religion is rooted in the will. Moreover, religions are not made, but *grow;* theism has developed from polytheism. The same views are introduced by Hume into his theory of the State; he rejects both the theological conceptions and the contract theory which found such favor in the eighteenth century. No compact or agreement was expressly formed for general submission; that is an idea far beyond the comprehension of savages. Each exertion of authority in the chieftain must have been particular, and called forth by the present exigencies of the case; the sensible utility resulting from his interposition made these exertions become daily more frequent, and their frequency gradually produced an habitual, and, if you please to call it so, a voluntary, and therefore precarious, acquiescence in the people. The people, if we are to trace government to its first origin in the woods and deserts, are the source of all power and jurisdiction, and voluntarily, for the sake of peace and order, abandoned their native liberty, and received laws from their equals and companions. The rationalistic conception here gives way to the *historical* or genetic point of view.

Anti-Intellectualism

52. Rationalistic Reaction in England

Cambridge School

Although empiricism remained the dominant note in British thought from the days of Roger Bacon and William of Occam down to very recent times, the opposition to this school never entirely disappeared. The rationalistic traditions of scholasticism were kept alive at the universities and among theologians, and spiritualistic systems of philosophy arose as a reaction against the radical speculations of Hobbes, Locke, and Hume. Ralph Cudworth (1617-1688), a professor at Cambridge, opposes the atheistic and materialistic teachings of Hobbes from the standpoint of Christian Platonism in his *True Intellectual System of the Universe,* 1678. He accepts Descartes's rationalism, but rejects all mechanical explanation of nature as leading to atheism. All men have the same fundamental notions or categories, and what is clearly and distinctly perceived is true. These *a priori* categories are the constant reflections of the universal reason, of God's mind, and likewise form the nature or essence of things. Among such innate truths are the moral laws, which are as binding on God as the axioms of mathematics. Cudworth's ethical philosophy is given in his posthumous work, *Treatisé concerning Eternal and Immutable Morality,* 1731, and *A Treatise of Free Will,* 1838.

Other members of the Cambridge school of Platonists and opponents of English empiricism are: Henry More (1614-1687; *Enchiridion metaphysicum, Enchiridion ethicum,* 1668); Theophilus Gale (1628-1677; *Philosophia universalis,* 1676); and John Norris (1657-1711; *An Essay towards the Theory of the Ideal or Intelligible World,* 1701, 1704).

See the works on English philosophy mentioned on pp. 254, f.; also Tulloch, *Rational Theology,* etc., vol. II; Martineau, *Types of Ethical Theory,* vol. II, Book II; Jodl, *Geschichte der Ethik;* Scott, *Introduction to Cudworth's Treatise;* Huebsch, *Cudworth;* Mackinnon, *Philosophy of John Norris.*

The rationalistic conception that there is universal and necessary truth, both speculative and practical, not derived from experience, continues in the English thought of the eighteenth century. Samuel Clarke (1675-1729; *Discourse concerning the Unalterable Obligations of Natural Religion,* 1708) teaches that

there are eternal and necessary differences and relations of things, and that divine and human reason perceives these as they are: no one can refuse to assent either to a correct mathematical proof or to moral truth. William Wollaston (1659-1724; *The Religion of Nature Delineated,* 1722) and Richard Price (1723-1791; *Review of the Principal Questions in Morals,* 1758, and *Letters on Materialism and Philosophical Necessity,* 1778) agree with this view, which is later taken up by the Scottish philosophy of Reid and his school.

Scottish Common-Sense School

The Scottish school, led by Thomas Reid (1710-1796), represents a reaction against the idealism of Berkeley and the skepticism of Hume. Empiricism had ended in the denial of the very things which the common-sense of mankind accepts as the most certain facts of knowledge,—the existence of an external world and the existence of an immortal soul,—indeed, it had called in question the possibility of truth itself. If the notions of substance and causality are mere illusions, and objects mere ideas in our heads, a substantial soul is impossible, the existence of God undemonstrable, and philosophy breaks down. Philosophy cannot contradict the common consciousness of mankind. Sensation carries with it an immediate belief in the reality of the object, and this immediate certainty supplies us with a criterion of truth. All proof rests on such direct knowledge, on self-evident, not further provable principles. The knowledge of these principles and of the criterion of truth is common-sense: such principles, which we discover by observation, are either first principles of necessary truths or first principles of contingent truths, or truths expressing matters of fact. As belonging to the former class, Reid mentions: the axioms of logic and mathematics, the principles of grammar, taste, morals, and metaphysical principles; among the latter he cites: the existence of every thing of which I am conscious; the thoughts of which I am conscious are the thoughts of a being which I call myself, my mind, my person; our own personal identity and continued existence; things really exist which we distinctly perceive by our senses, and are what we perceive them to be; we have some degree of power over our actions and the determinations of our will; the natural faculties by which we distinguish truth from

error are not fallacious; there is life and intelligence in our fellow-men; what is to be, will probably be like to what has been in similar circumstances.

Other members of the Scotch school are: James Beattie (1735-1803), James Oswald (+1793), and Dugald Stewart (1753-1828; Collected Works edited by Hamilton, 1854-1858). Thomas Brown (1778-1820; *Inquiry into the Relation of Cause and Effect,* 1803) seeks to reconcile the teachings of Hume with the philosophy of common-sense. In Sir William Hamilton this philosophy comes under the influence of Kant's criticism. The German philosophers of the Enlightenment were attracted to the Scottish philosophy, with which they had much in common, and translated many of the writings of the school. In France, Royer-Collard and Th. Jouffroy espoused the philosophy of common-sense in opposition to sensationalism, materialism, and positivism. (See pp. 380, f., 504, 513, ff.)

Writings of Reid: *An Inquiry into the Human Mind on the Principles of Common Sense,* 1764; *Essays on the Powers of the Human Mind,* 1785, 1788. Collected Works by Hamilton, 7th ed., 1872; Selections from *Inquiry* by Sneath. See Fraser, *Reid;* Peters, *T. Reid als Kritiker von D. Hume.* On the whole movement see especially the works on Scottish and English philosophy mentioned pp. 254, f.

DEVELOPMENT OF RATIONALISM IN GERMANY

53. Gottfried Wilhelm Leibniz

Rise of German Culture

Philosophy made little headway in Germany during the centuries preceding the eighteenth. The barren theological controversies following the Reformation, and the Thirty Years' War (1618-1648), were not favorable to the development of science and philosophy. The period which produced Shakespeare, Bacon, Milton, and Locke in England, Montaigne, Corneille, Racine, Molière, Pascal, and Descartes in France, found culture at a low ebb in the land of Luther. The German language itself seemed to have perished as a literary instrument: the higher classes spoke French and the scholars still wrote in Latin,—the common people alone used the mother-tongue. French culture was introduced through the countless courts which were patterned after the French paternalistic models and imitated French manners. With the division of Germany into independent territorial principalities, the spirit of nationalism declined, and Germans became ashamed of the

German name. The universities,—in this respect like those of England and France,—took no part in disseminating modern ideas; the new science and philosophy grew up outside of the universities and were encouraged by educated polite society. The first great representatives of the new culture in Germany are: Samuel Pufendorf (1632-1694), who introduced natural law into Germany, Christian Thomasius (1655-1728), who published the first periodical in the German language and was the first to lecture in German,—at the University of Leipzig,—and Leibniz, who distinguished himself in mathematics, jurisprudence, and philosophy. Walter von Tschirnhausen (1651-1708), who corresponded with Spinoza and Leibniz, accepted the mathematical method, but held that all deductions must begin with the facts of experience and find their verification in experience. All these thinkers are pioneers of modernism in Germany and forerunners of the Enlightenment, which had already begun to sow its seed in England and in France and which was destined to reap a rich harvest in the land of Lessing, Goethe, and Kant.

The Problem

Descartes assumes two distinct principles of explanation, body and mind, the essential attributes of which are, respectively, extension and thought. Spinoza sets up one universal substance, which, however, is conceived as both extended and thinking. Both philosophers regard the physical and mental realms as two absolutely closed systems, with the difference that Descartes permits interaction between the two at a single point in the human brain. Everything on the physical side is explained physically: for both the corporeal universe is a machine. The mechanical explanation was accepted by modern philosophers and modern natural scientists alike. It met with vigorous opposition, however, from the philosophical-theological scholastic systems which dominated most of the universities, and was condemned as a godless doctrine that failed to take account of the divine purpose in the world. Like his predecessors, Leibniz became acquainted with the scholastic metaphysics at the university and subscribed to the traditional world-view of the Protestant schoolmen in his youth. But the study of modern philosophy and science and, especially, his discovery of the infinitesimal calculus caused a

significant advance in his thought, and suggested the necessity of a theory that would do justice to the achievements of modern science and philosophy as well as to the valuable elements in Christian-scholastic speculation,—a system, in short, that would reconcile mechanism and teleology, natural science and theology, modern and ancient philosophy. And the mathematician Weigel of Jena, his teacher, had convinced him of the truth of a conception that remained the basis and guiding principle of all his later efforts to construct a world-view: the Pythagorean-Platonic notion of the harmony of the universe. He never abandoned the idea that the universe is a harmonious whole, governed by mathematical and logical principles, that mathematics and metaphysics are, therefore, the fundamental sciences and the demonstrative method the true method of philosophy.

Gottfried Wilhelm Leibniz (1646-1716) was born in Leipzig, and studied law, philosophy, and mathematics at the universities of his native city, Jena, and Altdorf, receiving his doctorate in law from the last-named institution in his twentieth year. Among his teachers were Jacob Thomasius, the father of the celebrated Christian Thomasius, and E. Weigel. After a sojourn (1670-1672) at Mayence, where he was engaged in the reform of the legal procedure of the Electorate, and a diplomatic mission to Paris (1672-1676), he was called to Hanover as court councilor and librarian, a post which he held to the day of his death (1716).

Among his writings, which consisted, for the most part, of shorter essays in Latin, French, and German, published in learned journals, and of private letters, are: *Meditationes de cognitione, veritate et ideis,* 1684; *Lettres sur la question si l'essence du corps consiste dans l'étendue,* 1691; *Nouveau système de la nature,* 1695; *Nouveaux essais sur l'entendement humain* (in reply to Locke's *Essay,* 1704; first published 1765); *De ipsa natura,* 1698; *Essais de Theodicée,* 1710; *La monadologie,* 1714; *Principes de la nature et de la grâce,* 1714.

Collection of philosophical writings edited by J. E. Erdmann, 1840; by Foucher de Careil, 1859, ff.; by Janet, 2 vols., 1866; by Gerhardt, 7 vols., 1875-1890; German writings by Guhrauer, 1838-1840. New material in: Couturat, *Œuvres et fragments inédits;* Kabitz, *Der junge Leibniz;* P. Ritter, *Neue Leibniz-Funde;* Baruzzi, *Leibniz, avec de nombreux textes inédites.*

Translations: *Philosophical Works* by Duncan, 2d ed.; *New Essays,* by Langley; *Monadology,* etc., by Latta; *Correspondence with Arnauld* and *Monadology,* by Montgomery.

Merz, *Leibniz;* Dewey, *Leibniz's New Essays;* B. Russell, *Critical Exposition of the Philosophy of Leibniz;* Guhrauer, *Leibniz,* 2 vols., transl. by Mackie; K. Fischer, *Leibniz;* Cassirer, *Leibniz's System;* Couturat, *La logique de Leibniz,* and *Sur la métaphysique de Leibniz*

(*Rev. de mét. et morale,* X, pp. 1-23); Renouvier, *La nouvelle monadologie;* de Careil, *Leibniz, Descartes et Spinoza;* E. Pfleiderer, *Leibniz und Geulincx;* Stein, *Leibniz und Spinoza;* monographs on the Leibnizian and Lockian theories of knowledge by Hartenstein, von Benoit, and Thilly; van Biema, *L'espace et le temps chez Leibniz et chez Kant.* Cf. also Zeller's able work, *Die deutsche Philosophie seit Leibniz;* Fabre, *La pensée moderne* (from Luther to Leibniz); Möller, *De Leibniz à Hegel.*

Notion of Force

Leibniz examined the presuppositions of the new science and found them inadequate. Even the facts of physics, he felt, could not be satisfactorily explained by the hypothesis of merely extended bodies and motion. Descartes had taught that the quantity of motion is constant. But bodies come to rest and bodies begin to move: motion seems to be lost and gained. This would violate the *principle of continuity,* the principle that nature makes no leaps. There must be something that persists when motion ceases, a ground of motion: this is *force,* or the *conatus,* or the tendency of the body to move or to continue its motion; and force is constant in quantity. Hence, there is no substance that does not act, that is not the expression of force: what does not act does not exist; only what is *actual* is real. Consequently, force, and not extension, is the essential attribute of body. Hence, also, the law of the conservation of motion must give way to the law of the conservation of force or energy. Another proof that extension cannot be the essential attribute of body is found in the composite nature of extension: that which is made up of parts cannot be a primary principle. Something simple is needed, and force is such a simple, indivisible reality.

The geometric or static conception of nature is replaced, in the Leibnizian philosophy, by the *dynamic* or *energetic* view. Bodies do not exist by virtue of extension, but extension exists by virtue of bodies (forces); there could be no extension without force, without dynamic bodies. According to Descartes, the existence of bodies presupposes extension; according to Leibniz, extension presupposes the existence of bodies or forces. Force is the source or "fountain of the mechanical world," the mechanical world the sensible appearance of forces. "Extension presupposes in the body a property, attribute, or nature that extends itself, spreads itself out, and continues itself." There

is a force in body that precedes all extension. It is owing to the force of resistance in the body that it appears as impenetrable and limited, or as matter. Every unit of force is an indivisible union of soul and matter, activity and passivity; it is an organizing, self-determining, purposive force that also limits itself or has the power of resistance.

Space, therefore, is conceived by Leibniz as the result of the harmonious coexistence of forces; hence it has no absolute existence,—there is no absolute space *in which* things exist,—but it is relative to the things and would disappear with them. Forces do not depend on space, but space depends on the forces. Hence, there can be no empty space between things and beyond things: where forces cease to act, the world comes to an end.

Body, then, is a plurality of simple forces. Since many things exist, there is not one single force in nature, but an infinite number of forces, every one of which is a particular, individual substance. Force is indivisible or simple, hence it is immaterial, unextended. Simple substances or forces are called by Leibniz metaphysical points, formal atoms, essential forms, substantial forms, or *monads,* units. They are not physical points, for these are nothing but compressed bodies; they are not mathematical points, for these, though "true" points, are not "real," but merely "points of view." Only metaphysical points are true and real; without them there would be nothing real, for without units there could be no manifoldness. Moreover, such force-atoms must be eternal: they cannot be destroyed,—only a miracle could destroy them,—nor can they be created: monads can neither arise nor disappear. The original scholastic conception of individual active substantial forms, which Leibniz carried away with him from the university, is thus transformed into the doctrine of individual forces.

Doctrine of Monads

We know now that the world of bodies is composed of an infinite number of dynamic units, or immaterial, unextended, simple units of force. What else can we say of this principle, where can we study it? In ourselves. We discover such a simple immaterial substance in our own inner life: the soul is such a substance. What is true of it, will be true, in a measure, of all monads. Reasoning by analogy, Leibniz interprets the

monads as spiritual or psychic forces. There is something analogous in them to our sensations and tendencies (conations, will); they have "perception" and "appetition." The same principle that expresses itself in the mind of man is active in body, plant, and animal. There is force everywhere, there is no vacuum anywhere; every part of matter is like a garden full of plants; all matter is animate, alive, even to its minutest parts.

But how can there be mind in the stone, and even in the plant? Well, says Leibniz, mind is not absolutely the same in stone, plant, and man. For Descartes there is nothing unconscious in mind and nothing unextended in matter. The facts of physics, however, show that nature is essentially immaterial, and the facts of psychology show that mind is essentially unconscious. Body and extension are not identical terms; and mind and consciousness are not identical terms. Mind consists of perceptions and tendencies. These perceptions differ in clearness and distinctness in different monads; indeed, the human mind itself reveals perceptions of different degrees of clarity. When I attend carefully to an object, the elements attended to stand out clearly and distinctly, whereas the surrounding parts become successively more and more obscure and indistinct, until they are not discerned at all. The farther an object is from the focus of my attention, the smaller and fainter it is. There are, therefore, clear perceptions and obscure perceptions; the latter are called "small perceptions," *perceptions petites.* Sensation cannot distinguish in the roar of the ocean the different elements or the minute perceptions produced by the motion of each separate wave, and yet every one of these separate sounds is contained in the sensation. Just as there are different degrees of clearness in the monad, so monads differ among themselves in the clearness of their perceptions. In the very lowest monads, everything is obscure and confused, in a condition resembling sleep; they exist in a kind of comatose state: such dormant life we find in the plant. In animals there is perception with memory, *i.e.,* consciousness; in man, consciousness becomes still clearer; here it is called *apperception,* being a "reflexive knowledge of the inner state," or self-consciousness.

Every monad has the power of perception or representation;

it perceives or represents and expresses the entire universe. In this sense it is a world in miniature, a microcosm; it is a " living mirror of the universe," a concentrated world, a world for itself. But each monad represents the universe in its own way, from its own point of view, with different degrees of clearness; it is limited, an individual, and has other individuals outside it. The higher the monad, the more clearly and distinctly it perceives or expresses or represents its part of the world; the monads nearest to it, or its own body, it represents most clearly. From this teaching it follows that " every body feels everything that occurs in the entire universe, so that any one who sees all could read in each particular thing that which happens everywhere else and, besides, all that has happened and will happen, perceiving in the present that which is remote in time and space."

The monads, moreover, form a graduated progressive series, from the lowest to the highest. The universe is composed of an infinite number of monads in a gradually ascending scale of clearness, no two monads being exactly alike; if they were, they could not possibly be distinguished (the principle of indiscernibles). There are no leaps in nature, no breaks in the line from the lowest to the highest; there is a continuous line of infinitesimal differences from the dullest piece of inorganic matter to God. Nothing is uninhabited, nothing unfruitful, nothing dead in the universe. God is the highest and perfect monad, pure activity (*actus purus*), the original monad, the monad of monads. The principle of continuity demands such a supreme monad.

Spinoza accepts one universal substance, Leibniz an infinite number of them. Descartes also assumes a plurality of substances, but his substances are diametrically opposed to one another in essence (mind and matter), while the Leibnizian forces are essentially alike. According to the Atomists, too, there are many homogeneous realities, but they are material; whereas for Leibniz they are spiritual. Like Plato's ideas the Leibnizian principles are eternal purposes, but they are *in* the things, as Aristotle taught: monads are entelechies. " To understand me," Leibniz declared, " you must understand Democritus, Plato, and Aristotle." In his younger days, he had held that particular things alone are real, that universals have their real ground in

particulars and do not exist apart from them, except in the mind of God. This individualistic and pluralistic conception he never abandoned; indeed, he broke up the entire universe into an infinite number of individual existences and made every one of them a spiritual entity.

Every monad is in process of evolution and realizes its nature with inner necessity. It is not determined from without; it has no windows through which anything can enter; everything it is to be is potential or implicit in it. This follows necessarily from the principle of continuity: nothing can be in the monad which has not always been there, and nothing can ever come into it that is not in it now. It passes through a series of stages of evolution, unfolding what is preformed in it. The entire human race was preformed in the seed of Adam and in the ovaries of Eve. The developed individual existed in germ, preformed in miniature, in the embryo. Nothing in the monad can be lost, all is preserved in the later stages, and the future stages are predetermined in the earlier ones. Hence, every monad is "charged with the past" and is "big with the future." This doctrine of preformation (the incasement theory) was common among the biologists of Leibniz's time (Leuwenhoek and Swammerdam). It was opposed by the theory of *epigenesis* ("progressive formation and differentiation of organs from a germ primitively homogeneous"), advanced by Caspar F. Wolff in 1759; but the latter conception did not meet with general acceptance until after the appearance of Darwin's *Origin of Species* in 1859.

The difference between organic and inorganic bodies is described as follows. Both are composed of monads or centers of force, but the organism contains a central monad, a "queen monad," a soul, which represents, or has before it, a picture of the entire body, and which is the guiding principle of the monads surrounding it. Inorganic bodies are not centralized in this way, but consist of a mere mass or aggregation of monads. The higher the bodies, the more organized they are,—the higher organism forming a well-ordered union of monads.

This suggests the problem of the relation of mind and body. How does the central monad influence its body? We might assume interaction between them, but Leibniz has already told

us that monads have no windows, that they cannot be influenced or acted upon from without. The occasionalistic doctrine that God created both body and mind and regulates the actions of each to keep time one with the other, as the watchmaker regulates his clocks, is also rejected. Leibniz's explanation is that God in creating minds and bodies has so arranged it, from the very beginning, that the two shall go together: the relation between soul and body is a relation of harmony preëstablished by God. Causal interaction is out of the question. There is a parallelism, or *concomitance,* between the mental and physical states: in this sense the body is the material expression of the soul. It must not be forgotten, however, that the body itself consists of numberless monads or psychic forces, every one of which is organic and acts in accordance with the preordained law of its nature. "Souls act according to the laws of final causes, by means of desire, ends, and means. Bodies act according to the laws of efficient causes or motions. And the two realms are in harmony with one another." In other words, the organic body and its minutest parts are preformed by God: they are "divine automata" or "divine machines."

This thought is extended to embrace the universe as a whole. All monads act together like the parts of an organism, every one of which has its function to perform. Everything is causally related, but causation means no more than concomitant changes, a harmonious action of the parts, which has been predetermined by God. God, in other words, has arranged his universe in such a way that it works without interference from him: every state in every monad follows as the effect of the preceding state in that monad, and acts in unison with the states of all the other monads. The harmony in the universe is thoroughgoing. Everything in nature can be *mechanically* explained in the sense that there is law, order, uniformity in the physical realm. But the plan of the whole points to a higher reason: God is the ultimate cause of all occurrence. "The source of mechanics lies in metaphysics," is the motto which Leibniz places at the head of his system.

We cannot demonstrate the necessity of the laws of nature, the laws of motion; they are not necessary like the laws of logic, arithmetic, and geometry. Their existence depends on their

utility, and this finds its ground in the wisdom of God. God has chosen them as ways of realizing his purpose, hence the world owes its existence to the purpose in the mind of God: God is the final cause who uses secondary or efficient causes as means.

Here we have the promised reconciliation of mechanism and teleology. Nature can be explained without introducing the notion of purpose, but the mechanical philosophy leads us to God, for we cannot explain the universal principles of physics and mechanics without divine purpose. Religion and reason are thus harmonized. There is also a harmony between the physical kingdom of nature and the moral kingdom of grace, that is, all rational souls and God himself. The souls are copies of God, little divinities in their own departments; man's reason is like God's reason in kind, though differing from it in degree. Man's purpose, too, agrees with God's. Hence, we have a kingdom or union of spirits, a harmony of souls. It is a moral kingdom in contrast to the physical kingdom,—a kingdom of grace, as Leibniz calls it. But there is harmony between the two, between God the builder of the machine of the universe and God the monarch of the divine spiritual State.

This brings us to Leibniz's theology. God is the highest monad, the monad of monads. His existence is proved in several ways. The principle of continuity demands a highest monad at the end of the series of forces. Theology Moreover, a cause is needed to explain the monads themselves,* in accordance with the principle of sufficient reason (the causal or cosmological argument). Finally, the order and harmony of nature call for a harmonizer (the physico-theological proof). The cause of the world must be outside of it; it must also be one since the universe is one, and it must be rational because there is order in it. Another argument is offered which may be called an epistemological proof. There are eternal and necessary truths, the truths of logic and geometry, which presuppose an eternal intellect in which to exist.

* Leibniz defines the monads as eternal substances in his metaphysical discussions, but adds that only a miracle could destroy a monad. In his theology, however, he declares that God created the monads and that God alone can destroy them. Sometimes he calls them "fulgurations" or manifestations of God, thus closely approximating to the pantheistic conception.

God as a monad is an individual, a person. But he transcends all monads, he is supernatural and superrational, the most perfect and most real being. Man cannot form a perfectly clear idea of God, because God is the highest monad and man is limited. Only a perfect mind could know a perfect mind. Man, however, raises the qualities which every monad possesses in a certain degree, to the highest power, and attributes to God omnipotence, omniscience, and absolute goodness. In this way we form a conception of God: he is superrational, but not contra-rational. Man also has obscure ideas of God, confused notions, a kind of longing or striving for God. There are, therefore, different stages of religion, corresponding to the different degrees of clearness with which the Deity is known.

God, being perfect, does not undergo change and development as do all other monads. He is complete in himself and his knowledge is complete; he sees all things whole and at a glance. He is reality realized. He created the world according to a plan, and chose this world as the best of all possible worlds. His choice was not groundless, but determined by the principle of goodness, that is, by moral necessity. He is also determined by logical necessity; that is, the fundamental laws of thought are binding on him as well as on man.

But how shall we account for evil in the world on this theory? The world is the best possible world, that is, the one in which there is the greatest possible variety and harmony at once. It is not perfect, however, it has its defects; God could not express his nature in finite forms without limitation and impediment. Such limitations are *metaphysical* evils; they result in pain and suffering (physical evil) and sin (moral evil). Besides, evil is a foil to goodness and beauty; like the dark phases of a picture, it helps to bring out the good. Again, virtue gains strength in combating evil; evil is the spur that goads us to good action. These arguments go back to the Stoics and Neoplatonism, and had become common property in the Christian theology of the Middle Ages.

Ethics is a rational science. There are certain moral principles native to the soul which cannot be demonstrated, but from which other moral truths necessarily follow. They operate unconsciously in us, as instincts, but we may become aware of

them. Thus the truth that we ought to seek pleasure and avoid pain is based on confused knowledge and inner experience, on the instinctive desire for happiness. From this principle others can be deduced, so self-evident in character that even a band of robbers would have to obey them to preserve their union. Ethics

Moral instincts guide men directly and without deliberation, but not irresistibly, for they may be corrupted by the passions and by evil habits. The principle of justice is found even in savages and forms a part of their nature. Although tradition, habit, and education help in developing such tendencies of the soul, they are ultimately rooted in human nature itself.

It is true, men do not always obey the inborn laws of morality, but this does not prove that they are ignorant of them. It is not an argument against the innateness of a moral principle to say that it is not recognized as such, nor is the public violation of such a law an argument; it is rather a proof of ignorance of the law. The fact is, these rules are not always clearly perceived, but need to be proved, just as the propositions of geometry require demonstration. Attention and method are necessary to bring them to the surface, and even scholars may not be fully conscious of them.

Mental life is, as we have found, essentially perception and appetite, that is, cognition and conation. The union of appetite and perception is called impulse or desire. *Will* is conscious impulse or striving, impulse guided by a clear idea. Hence, will is never an indifferent will, or caprice, but always determined by an idea. Man is free in the sense that he is not determined from without,—the monad has no windows by which anything can enter to compel it,—he is, however, determined from within, by his own nature, by his own impulses and ideas. Choice follows the strongest desire. To desire to be free to decide for one act rather than another is to desire to be a fool. .

Leibniz's theory of knowledge rests on his metaphysical presuppositions. He accepts the rationalistic ideal that genuine knowledge is universal and necessary, that it is based on principles not derived from experience. The universe is a mathematical-logical system which reason alone can decipher. Since the soul-monad is an independent being which no external cause

can influence, knowledge cannot come to it from without, but must arise within the soul itself. The soul, therefore, cannot be an empty tablet upon which external nature writes its characters, as Locke holds. All our knowledge lies implicit in the mind: sensation and understanding alike; experience does not create it, but it is brought out, cleared up, made explicit by experience. Nothing can exist in the intellect that did not first exist in sensation; true,—except, Leibniz adds, the intellect itself. But even if we disregard the monadic theory, he declares, it can be proved that knowledge does not come from the senses. If it did, universal knowledge would be impossible, for so-called empirical truths are without necessity, they are accidental propositions: we cannot assert that because something has happened, it *must* always happen in the same way. Universal and necessary propositions cannot be derived from the senses; they have their seat and origin in the mind itself.

Logic and Theory of Knowledge

Locke had argued that there can be no such innate or *a priori* knowledge because we are not always conscious of it. Locke would be right if nothing could be native to the mind without the mind's being conscious of it. If the Cartesian identification of mental life with consciousness is legitimate, the empiricist's arguments are valid. The mind, however, is not always conscious of its ideas: ideas and principles may exist in the mind without our being conscious of them. Still, if it could be shown that all our truths actually spring from sensation, this correction of the Lockian view would do us no good. But it cannot be shown. The propositions derived from experience, or reached by induction, are wanting in universality and necessity; they do not yield certain knowledge: however numerous the examples of an occurrence may be, they do not prove that the event will always and *necessarily* take place. We possess knowledge which does not depend on the testimony of the senses: propositions that are universal and necessary, as, for example, the truths of mathematics. It is evident that the mind itself adds something in this case which the senses cannot furnish. Logic, metaphysics, ethics, theology, and jurisprudence are full of propositions which rest on principles having their origin nowhere but in the mind itself. To be sure, without sense-experience we

might never become conscious of such principles; our senses furnish the occasion for our perceiving them, but they do not *produce* or create them. Without them there would be no science at all, but only a collection of details. "The final proof of necessary truths comes from the understanding alone, and the other truths are derived from experiences, or the observation of the senses. Our mind is capable of knowing both, but it is itself the source of the former. However numerous the particular experiences we have of a universal truth may be, we can never be absolutely sure of it by induction, unless we know its necessity through reason." "The senses can arouse, justify, and verify such truths, but not demonstrate their eternal and inevitable certitude."

Such innate truths do not exist in the soul as conscious truths: "we cannot read off the eternal laws of reason as the edicts of the prætor are read off from the book, but we can discover them in ourselves by attending to them when the senses offer us the occasion." Ideas and truths are innate as tendencies, predispositions, and natural potentialities, and not as actions, "although these potencies are always accompanied by certain, often insensible, actions, which respond to them." In this sense, arithmetic and geometry are potential in us; we can draw them out of ourselves without employing a single empirical truth. That such truths are discovered later than the *ideas* of which they consist (Locke) proves nothing against their originality; nor does the fact that we first learn the signs, then the ideas, and then the truths themselves. General principles,—the principle of identity, for example,—constitute the very life of our thinking; the mind depends on them every moment, although great attention may be required to become aware of them. We instinctively employ even the rules of logic in our natural reasoning, without being conscious of them. That there are also such innate principles in the field of ethics, we have already seen.

A bare faculty of receiving ideas is, therefore, a fiction. But so are the pure faculties or powers of the schoolmen fictions or abstractions. We never find a faculty anywhere that is shut up in itself, that does not do anything: the soul is always predisposed to act in a particular way, in one way rather than

in another, *i.e.*, possesses definite tendencies. Experience is necessary to stir up the soul, but cannot create ideas. The soul is not a piece of wax on which impressions are stamped; those who regard it thus, really make a material entity of it. The empiricist objects that there is nothing in the intellect that did not exist before in sensation. He is right, says Leibniz, only he should add,—except the intellect itself. The soul contains within itself Being, Substance, Unity, Identity, Cause, Perception, Reasoning, and Quantity,—notions which the senses could never give us.

In this teaching, Leibniz aims to reconcile the differences between apriorism and empiricism, a task which was afterwards undertaken on such a large scale by Kant. He also partly anticipates Kant in his conception of space as a form of the mind. Sense-perception and intelligence are, as functions of the indivisible monad, the same in kind, but they differ in degree. Sensations are obscure and confused ideas, while the objects of the understanding are clear and distinct. Sense-perception does not know things in their true reality, as they are in themselves, that is, as active spiritual substances or monads, but perceives them, obscurely and confusedly, as phenomena, as spatial. The coexistence of monads, which for clear conceptual thought is a harmonious order of spiritual substances, is perceived by sense-perception as an extended phenomenal world. In other words, the perceiving subject sees and imagines the spiritual order in terms of space: "our ideas of space, figure, motion, rest," Leibniz tells us, "have their origin in the common sense, in the mind itself, for they are ideas of the pure understanding, which, however, have reference to the external world." According to this view, the idea of space is native to the mind, as Kant later taught. It is not, however, as we have already seen, merely an idea in us, or merely a way of looking at things, aroused in us by the coexistence of monads; an objective material world results from the coexistence of monads. But space is not real; it is the expression or manifestation or phenomenon of force, which is the real thing.

Rational knowledge is possible only through innate principles, on which our valid reasonings are based. Among these are the principle of identity and contradiction, which is the

criterion of truth in the sphere of pure thought, and the principle of sufficient reason, which is the criterion of truth in the sphere of experience. The principle of sufficient reason has not merely a logical meaning for Leibniz,—every judgment must have a ground or reason which proves its truth;—it is a metaphysical principle as well,—everything must have a sufficient reason for being;—it implies logical ground and real ground (*ratio cognoscendi* and *ratio essendi*). On it are based physics, ethics, metaphysics, and theology: "unless we accept it, the proof of the existence of God and of many philosophical theories goes to pieces." The universe is a rational system in which nothing happens without a sufficient ground; it is conceived in analogy with a logical system in which the propositions are rationally related. The problem of philosophy is to discover the fundamental principles of knowledge, which are at the same time the fundamental principles or presuppositions of reality. There is the same necessity in the real universe as there is in a logical system. Leibniz's logic influences his metaphysics. But his metaphysics also influences his logic: his conception of knowledge as a development of principles immanent in the mind, rests on his spiritualistic monadology, as we have seen. His individualism does not follow as a necessary consequence from his logical conception of the universe; the existence of independent individuals cannot be justified to the logical reason. Leibniz, however, finds a teleological explanation for the existence of the individual: the individual is the goal of the divine creative will, and must, therefore, be contained in the world-ground from the very beginning. Here, a human value is read into the logical ground of the universe.

Besides clear and distinct knowledge there is confused knowledge. Thus, for example, harmony and beauty are based on certain proportional relations. These may be clearly known by the scholar, but they need not be; they express themselves in a feeling of æsthetic enjoyment, which is therefore an obscure perception of harmony, or form, in man. So, too, the soul perceives the order of things, the harmony of the cosmos, without possessing a clear and distinct knowledge of it; here it has an obscure feeling of God. This, too, is a confused knowledge which can become clear.

54. Successors of Leibniz

The Leibnizian philosophy is followed in Germany by a philosophy of common-sense similar to that of the Scottish school of Reid. Leibniz was the first great German thinker of the modern period to attempt a metaphysical system, but nearly all of his writings consisted of letters and articles composed in French or Latin and published in various journals. It became the task of Christian Wolff (1679-1754), professor at Halle, to systematize the Leibnizian teachings, to adapt them to common-sense, and to present them in the German language. He accepts the rationalism of Descartes, Spinoza, and Leibniz and identifies the method of philosophy with that of mathematics. At the same time, he holds that the facts of experience will agree with the deductions of reason: reason and sense-perception are both legitimate faculties of knowledge. He adopts the Cartesian dualism of mind and matter, but regards force as the essential attribute of body, and explains the apparent interaction between soul and body as a preëstablished harmony (Leibniz). With Spinoza, he conceives the universe as an interrelated causal order, but also retains the teleological interpretation of Leibniz. He likewise introduces the notion of development into his system.

Philosophy of Common-Sense

Wolff divides the sciences into theoretical and practical, according to the two faculties of the soul, cognition and appetition; including under the former: ontology, cosmology, psychology, and theology (all of which constitute metaphysics); under the latter: ethics, politics, and economics. The sciences are also classified as rational and empirical, according as their propositions are derived from reason or from experience (rational cosmology and empirical physics; rational psychology and empirical psychology, etc.). Logic forms the introduction to all the sciences.

Wolff wrote text-books on all these subjects in German and Latin, which were used in the German universities for many years, and created many of the German philosophical terms in use to-day. Although he was lacking in originality and actually weakened the Leibnizian philosophy, he gave an impetus to the

study of philosophy in Germany, and contributed to the Enlightenment.

Among the followers of the Leibniz-Wolffian school were Bilfinger (1693-1750), A. Baumgarten (1714-1762), the founder of German æsthetics, and Kant during his earlier period. The Wolffian philosophy developed into an eclectic movement, which sought to reconcile empiricism and rationalism and prepared the way for Kant's *Critique of Pure Reason.* We mention M. Knutzen (+1751), Kant's teacher; J. H. Lambert (1728-1777), one of Kant's correspondents; N. Tetens (1736-1805), who influenced Kant. Other representatives of this eclecticism are the so-called *popular philosophers,* whose chief merit consisted in presenting the dominant philosophy in popular form: M. Mendelssohn (1729-1786); C. Garve (1742-1798), the translator of Ferguson's and A. Smith's writings; J. J. Engel (1741-1802); E. Platner (1744-1818); F. Nicolai (1733-1811). Samuel Reimarus (1694-1768), influenced by this school and English deism, was a deist and an acute critic of the Scriptures. All these thinkers may be regarded as representatives of the German *Aufklärung* of the eighteenth century.

Zeller, *op. cit.;* K. Fischer, *Leibniz;* Baumann, *Wolffsche Begriffsbestimmungen;* Zimmermann, *Lambert: der Vorgänger Kants;* Störring, *Die Erkenntnistheorie von Tetens.*

The rationalism of Leibniz and Wolff did not satisfy all thinkers; some lacked faith in the competence of reason to arrive at truth and yet were unwilling to join the ranks of the empiricists or skeptics. These men, the lineal descendants of the mystics, found in inner experience, in feeling and instinct, the source of certainty: the highest truths cannot be demonstrated, but only felt. There was some justification for such a view in the teaching of Leibniz that feeling, craving, or impulse is but another stage of knowledge, an instinctive form of truth. Leibniz regarded this as a lower, confused form of knowledge; the philosophers of faith or feeling discover in it a higher phase: what the limited reason of man cannot fathom, may be felt or divined in religious, æsthetic, or moral feeling. We mention: J. G. Hamann (+1788), J. G. Herder (1744-1803), who criticizes Kant's *Critique of Pure Reason* in his *Metacritique,* and F. H. Jacobi (1743-1819), who opposes rationalistic metaphysics with a philosophy based on intuition. (See pp. 428, ff.)

Mysticism

A kindred movement, called Pietism, arose in German Protestantism as a reaction against the rationalizing theology of the new church: Christianity is not a doctrine for professors to

speculate upon, but an inner religious conversion. P. J. Spener (1635-1705), A. H. Francke (1663-1727), and J. J. Lange (1670-1744) are conspicuous members of this wing; the last two were responsible for C. Wolff's dismissal from his professorship at Halle.

PHILOSOPHY OF THE ENLIGHTENMENT

55. Progress of Enlightenment

Eighteenth Century

We have described the modern spirit as a spirit of revolt against medieval society, its institutions and conceptions, and as the self-assertion of human reason in the field of thought and action. The work begun by the Renaissance was continued in the sixteenth and seventeenth centuries; the Reformation, the Thirty Years' War, and the political and social revolutions in England and in France (the Fronde) were symptoms of the change. The great Continental systems and English empiricism, with their various offshoots, added fuel to the flame which had produced them; and the spirit of independent inquiry slowly but surely transformed the view of life. But the new ideas had to be popularized and disseminated over larger areas of mankind, and this task was performed during the eighteenth century, which has been called the century of the Enlightenment: it represents the culmination of the entire intellectual movement which we have been describing. It is an age in possession of principles and world-views; full of confidence in the power of the human mind to solve its problems, it seeks to understand and to render intelligible human life,—the State, religion, morality, language, —and the universe at large. It is an age of philosophical dogmas, an age that has the courage to write books like Wolff's *Reasonable Thoughts on God, the World, and the Soul of Man, also on All Things in General.* It is the age of free and independent thought that speaks out its ideas boldly, particularly in France, and fearlessly draws the consequences of its principles.

Philosophy in the eighteenth century not only mirrored the strivings of the times, but influenced their action. It came out

of the closet of the scholars, and, as in the days of Socrates, mingled with the crowd in the market-place; it no longer spoke a special language of its own,—the language of the schoolmen,—but expressed itself in the speech of the people and in terms intelligible to men of general intelligence. In France, owing to social, political, and ecclesiastical oppression, the Enlightenment found its most radical utterance; and here its influence was greatest: the Revolution was the result of the propagation of the new ideas. The respect for human reason and human rights which characterized nearly all the important modern philosophical doctrines, became universal in the eighteenth century, and the words humanity, good-will, natural rights, liberty, equality, brotherhood were on every tongue. Even the paternalistic governments regarded it as their function to contribute to the happiness and welfare of mankind. The revolt against medievalism culminated in the great social and political upheaval that marked the close of the century: the old régime gave way to a new society. What the modern spirit had been demanding was in part achieved: liberty of conscience and worship, equal opportunity and economic freedom, representative government and equality of all individuals before the law.

Hibben, *The Philosophy of the Enlightenment;* Lévy-Bruhl, *History of Modern Philosophy in France;* Macdonald, *Studies in the France of Voltaire and Rousseau;* the essays of John Morley on Voltaire, Diderot, Rousseau, and Condorcet; Stephen, *English Thought in the Eighteenth Century;* Fabre, *Les pères de la révolution* (from Bayle to Condorcet); Damiron, *Mémoires pour servir à l'histoire de la philosophie au XVIII. siècle,* 3 vols.; Hettner, *Litteraturgeschichte des 18. Jahrhunderts;* Ritchie, *Natural Rights;* and histories of politics.

Chief among those who helped to awaken the new spirit and to spread the new ideas in France, and indeed throughout Europe, were Voltaire (1694-1778) and Montesquieu (1685-1755), both of whom had visited England and were filled with admiration for English institutions. Voltaire, the brilliant and versatile propagandist of the Enlightenment, popularized and applied the Lockian ideas,—which he had brought back with him from England together with Newton's natural philosophy and English deism,—in his *Lettres sur les Anglais,* 1728, a book which was burned by order of the cen-

Voltaire

sorship. He himself was a deist and never gave up his belief in God: "All nature cries out to us that he exists." In his earlier writings he also accepts the freedom of the will and the immortality of the soul, but, later on, he becomes skeptical with regard to life after death, and also inclines to determinism: "When I can do what I will, I am free; but I will necessarily what I will." But he always ruthlessly attacked superstition and ecclesiastical domination: revealed religion he regarded as the product of ignorance and deceit, as the work of clever priests making use of human stupidity and prejudice in order to rule over men. His religion was based on the immutable principles of morality, which, in his opinion, have remained essentially the same in the teachings of philosophers. He combated oppression of all kinds and fought for intellectual, political, and religious liberty: for the freedom of the press, the freedom of elections, the freedom of parliaments, and he demanded political rights for the third estate or the *bourgeoisie,* which had grown prosperous in industry and trade. And yet, in spite of all his liberalism, he was not an apostle of democracy; he had no faith in the capacity of the lower classes for self-government: "it seems necessary," he said, "that there should be an ignorant rabble; when they begin to argue, everything is lost." The age of reason is not intended to include "lackeys, cobblers, and hired girls" in its blessings.

Voltaire's thoughts, for the most part, express the spirit of the Lockian philosophy, although the influence of Bayle's *Dictionary,* which affected nearly all the intellectual leaders of France in the eighteenth century, must not be overlooked. English ideas had a large share in liberalizing and revolutionizing France.

Besides the works already mentioned, see monographs on Voltaire by Carlyle, Feuerbach, Bersot, Desnoiresterres, Pellissier, and Sakmann.

Among the men who assisted in developing and propagating the English empirical philosophy were: Condillac, Helvetius, Condorcet, Cabanis, Volney, Bonnet, Destutt de Tracy, La Mettrie, Holbach, and, especially, the Encyclopedists, led by Diderot and d'Alembert.

In England the Enlightenment did not reach its zenith within a comparatively short period, as in France; nor did its influence express itself so spectacularly as there. The social condi-

tions were not the same, and there had been greater progress: the new ideas and ideals had gradually found their way into the life of the people. Nearly all the philosophers who based themselves on the Lockian principles may be called illuminators. The deists, the moralists, Hume, Hartley, Priestley, Erasmus Darwin, William Godwin, the author of *Political Justice* (1793), Thomas Paine, the author of *The Rights of Man* (1791-92) and *The Age of Reason* (1794), all encouraged the progress of independent thought.

Enlightenment in England

In Germany the Leibniz-Wolffian metaphysics remained the dominant system until the middle of the eighteenth century, when English ideas began to exercise an influence through translations of the works of Locke, Hume, and English moralists like Shaftesbury, Hutcheson, and Ferguson. The result was a combination of rationalism and empiricism, an eclecticism or common-sense philosophy that conceives the universe and human history as a rational, teleological order which can be made perfectly intelligible to reason because it is the expression of reason. Its task consists in clearing up (*Aufklärung*) all mystery and banishing all superstition, in illuminating everything by the light of reason. It offers a natural or rational theology, undertaking to prove and make clear the fundamental doctrines common to all religions: the existence of God, the freedom of the will, and the immortality of the soul. We have already mentioned the leading figures in this movement in metaphysics. The same rationalistic method is applied in the study of history: language, law, the State, morality, religion owe their origin to human reason; language, for example, was invented by man to communicate his thoughts, the State organized in order to insure his welfare. Since all these things are the work of reason, the ideal should be to make them more and more rational, to eliminate the irrational and accidental elements that have crept into them and corrupted them in the course of history. It was this rationalistic mode of thought that helped to transform the political theories in Germany and made popular the doctrines of equality and natural rights even in the courts of the rulers (Frederick the Great and the Emperor Joseph): social distinctions are contrary to nature and contrary to reason.

German Enlightenment

The *Aufklärung* even carries its standards of clearness and utility into the field of æsthetics; poetry, sculpture, architecture, and painting follow rationalistic models: Gellert's fables, as some one has said, are "moral philosophy in verse" and his religious hymns a "rational theology put into rhyme." Gottsched wrote a book on the *Art of Poetry* which shows how poetry must be made in order to serve as a means of enlightening and moralizing mankind.

This is the same movement which, a century before, had found its voice in England in the philosophy of Locke. It is opposed by the great leaders of literature and philosophy who made the last quarter of the eighteenth century the brightest period of German intellectual life. Kant attacks the rational theology of the Enlightenment, Herder its rationalistic interpretations of history, Winckelmann and Lessing, Goethe and Schiller its rationalistic æsthetics.

We have seen how the Cartesian philosophy led to an objective idealism in Malebranche, and how English empiricism became idealism in Berkeley. The same great movements were also turned to materialistic account in the eighteenth century. Descartes offered a mechanical explanation of the organic kingdom, and conceived the animal as a complete machine. This suggested the thought that man, too, is a machine, and that the soul is not a separate entity, but a function of the body. The attempt of Locke's successors (Condillac, Hartley, and others) to reduce all mental processes to sensations formed an easy transition to the view that such elementary states are merely effects of the brain. Leibniz reduced matter to force and conceived it as analogous to spiritual activity; others reversed the order and interpreted spiritual activity as physical force. And when the spiritual principles, which filled the universe of the old Aristotelian metaphysics, were banished from nature by modern science and relegated to a separate world of their own by philosophy, what wonder was it that some thinkers should have dispensed with them altogether and explained all phenomena as the results of matter in motion?

Materialism and Evolutionism

The materialistic world-view made headway in England and in France during the eighteenth century, and by the end of

that period had become a popular doctrine in the enlightened circles of the latter country. According to John Toland (1670-1721), in his later writings (*Pantheisticon,* 1720), thought is a function of the brain, " a certain motion of the brain "; the tongue is no more the organ of taste than the brain is the organ of thought. David Hartley (1704-1757) makes all mental processes depend on vibrations in the brain, which follow mechanical laws,—psychological association being attended by physiological association,—but does not reduce states of consciousness to motion. He is not sure whether the relation ought to be regarded as a causal one or not. Joseph Priestley, the discoverer of oxygen (1733-1804), however, identifies psychical processes with movements, thus boldly accepting the materialistic solution of the mind-body problem. Nevertheless, he does not deny the existence of God or the immortality of the soul; following Hobbes, he declares that there is nothing inconsistent with Christianity in the conception of the materiality of the human and the divine soul.

The Frenchman La Mettrie (1709-1751; *Histoire naturelle de l'âme,* 1745, *L'homme machine,* 1748, *L'homme plante,* 1748), who was influenced by both Descartes and Locke, bases his materialism on Descartes's mechanical explanation of the animal organism: if the animal is a machine, why not man? The materialistic theory is elaborated into a comprehensive system of metaphysics by the German Baron d'Holbach (+1789), in the *Système de la nature* (first published in London, 1770, under the pseudonym of Mirabaud). Everything is explained by matter and motion, as the effect of necessary laws. There is no soul; thought is a function of the brain; and matter alone is immortal. The human will is strictly determined; there is no design in nature or outside of nature, no teleology and no God.

Other advocates of materialism, though not always consistently and openly such, are: Denis Diderot (1713-1784, editor of the *Encyclopedia*) during the later period of his life; Cabanis (1757-1808; Thought is the function of the brain, as digestion is the function of the stomach, and the secretion of bile the function of the liver), and Destutt de Tracy (1754-1836). The French biologists Buffon (*Histoire naturelle,* 1749, ff.) and Robinet (*De la nature,* 1763, ff.) accepted a modified

form of materialism (hylozoism); Buffon assumes the existence of molecules endowed with life, and Robinet (who was influenced by Leibniz) gives sensation to every particle of matter. Evolutionary conceptions appear in the writings of many of the thinkers of the time, for example in La Mettrie's *L'homme plante* and *La système d'Epicure,* 1748; in Diderot's *De la nature,* 1763, ff., and de Bonnet's *La palingénésie philosophique,* 1769. These men may be regarded as forerunners of Lamarck and Darwin.

However the thinkers of the French Enlightenment may differ in details, they agree that the phenomena of nature, be they physical or mental, are governed by law, that the mental and moral life of man is a necessary product of nature. From this standpoint, Helvetius (+1771) explains human morality, the economists Turgot and Condorcet (1743-1794) develop a philosophy of history, and Montesquieu (1689-1755; *Esprit des lois,* 1748) studies human laws and institutions.

Hibben, *op. cit.,* chap. v; Weber, *op. cit.,* pp. 399-417; Höffding, *History of Modern Philosophy,* vol. I, Bk. V; Lange, *History of Materialism;* Cousin, *Philosophy of Locke;* Ueberweg-Heinze, *op. cit.,* § 18; Damiron, *op. cit.*

Sciences

The age of the Enlightenment did not confine itself, however, to the propagation of the general ideas which the preceding centuries had worked out; it devoted itself assiduously to the study of the sciences, natural and mental. It has no reason to be ashamed of the men whom it produced in these fields: Euler, Lagrange, and Laplace in mathematics; Herschel and Laplace (*Mécanique céleste*) in astronomy; Galvani and Volta in physics; Lavoisier, Priestley, Davy, Haüy, and Berzelius in chemistry; Linné, Haller, Bichat, and C. F. Wolff in biology; Alexander von Humboldt, who was eminent in many sciences; Montesquieu in politics and jurisprudence; Quesnay, Turgot, and Adam Smith, the founders of the new political economy; Baumgarten in æsthetics; not to speak of the psychologists and moralists already enumerated.

The Enlightenment glorified knowledge, the sciences and the arts, civilization and progress, and boasted of the achievements

of the human race. The pride and self-confidence of the Enlightenment were, however, rudely shaken by Jean Jacques Rousseau (1712-1778), who characterized the arts and sciences as fruits of luxury and indolence and the source of moral decay (*Discours sur les sciences et les arts,* 1750, and *Discours sur l'origine et les fondements de l'inégalité parmi les hommes,* 1753), and demanded a return to the naïveté and simplicity of nature. Man is by nature innocent and good; he possesses an impulse to preserve himself and to develop his capacities, but he is also prompted by sympathy for others and inspired by religious feeling, gratitude, and reverence. Morality and religion are not matters of reasoned thinking, but of natural feeling. Man's worth depends not on his intelligence, but on his moral nature, which consists essentially of feeling: the good will alone has absolute value. Rousseau emphasizes the importance of the sentiments as an element in our mental life, and denies that the development of reason brings with it the perfection of man. Men are equal by nature; society, through the institution of property, has made them unequal, so that we now have masters and slaves, cultured and uncultured, rich and poor. Civilization, with its culture and the inequalities resulting therefrom, has corrupted our natural inclinations, producing the slavish and the lordly vices, servility, envy, hatred, on the one hand, contempt, arrogance, and cruelty on the other, and has made life artificial and mechanical. These views resemble certain modern socialistic theories which seek the origin of vices and virtues in social conditions and look for the perfection of man in the improvement of society.

Jean Jacques Rousseau

Rousseau substitutes for representative government direct government by the people (initiative and referendum). His political theory is the theory of the Swiss republican, as Locke's, which Voltaire followed, was that of the English constitutional monarchist. Among the people he included not only the third estate or the prosperous *bourgeoisie,* but the fourth estate or the laboring and peasant class, to which he himself belonged and for which he demanded equal rights and deliverance from social bondage, as Voltaire had demanded equal political rights and liberty of thought and conscience for the middle class. Rousseau takes the Lockian ideal of democracy seriously; if all men are

created free and equal and have the same natural rights and capacities, there is no reason why they should be ruled or deprived of their inheritance by a privileged class, be it an aristocracy or an industrial *bourgeoisie*. It was Rousseau's ideas that found their way into the Declaration of the Rights of Man,* of 1789 and 1793; and it is these notions which are influencing legislation in many countries to-day.

The return to nature will deliver us from this corrupt and artificial existence, and can be accomplished only by the creation of natural social conditions and a natural method of education. (*Contrat social,* 1762, and *Émile,* 1762.) Natural society is based on a contract in which the individual surrenders his individual freedom for the liberty of citizenship, which is limited by the general will, or the moral will of the people. Freedom is obedience to self-imposed law. Sovereignty lies with the people; the general will,—that is, the will of the people in so far as it aims at the common good,—is the highest law. Government executes the commands of the people, who can limit or recall the power delegated to it.

Rousseau's theory of education is a plea for natural education: for the free development of the child's natural and unspoiled impulses. Instruction should not begin until the desire for knowledge arises. Hence, education must be largely negative, consisting in the removal of unfavorable conditions, a task that requires the greatest care. The individuality of the child should be studied and nature assisted in distinguishing between good and bad impulses. It is wise, therefore, to isolate the child from its social environment in order that this development may follow its natural course under the guidance of private teachers. Rousseau's theory exercised great influence on modern education: Basedow, Pestalozzi, and Froebel are among those who have put it to the practical test.

These ideas are not inconsistent with the Lockian principles. If the soul is by nature an empty tablet, then men are by nature equal, and differences between them are the result of external

* Article I of the Declaration of 1789 reads: "Men are born and remain free and equal in rights. Social distinctions can only be founded on social utility." Article VI: "The law is the expression of the general will. All citizens have a right to take part, personally or by their representatives, in its formation." See Hobhouse, *Liberalism,* p. 61.

causes of all kinds, as Helvetius had already taught. 'Education and the social environment become the most important instruments for the perfection of the human race.

Rousseau, like Voltaire, combats materialism and atheism, accepting the tenets of natural religion; in this sense he is a deist. But with him religion is rooted in feeling, it is a matter of the heart and not of the head, though its truths may be demonstrated by reason. The soul is immaterial, free, and immortal; a future life is made necessary by the triumph of evil in this world.

Rousseau exercised a mighty influence in Germany,—on Kant, Herder, Goethe, and Schiller. Kant bears witness to the change produced in his conceptions by Rousseau's thoughts in the following passage: "I am myself an investigator by inclination, I feel the intensest craving for knowledge, and the eager impatience to advance in it, as well as satisfaction with every step of progress. There was a time when I believed that all this might redound to the glory of mankind; and I despised the ignorant rabble. Rousseau has set me right. The boasted superiority has vanished; I am learning to respect mankind, and I should regard myself as of much less use than the common laborer if I did not believe that this reflection could give value to all other occupations, that is, reëstablish the rights of mankind."

See, besides the works on the Enlightenment, p. 383, monographs on Rousseau by John Morley, Macdonald, Höffding; the volume in the *Bibliothèque générale des sciences sociales,* by many French scholars; Rodet, *Le contrat social et les idées politiques de J. J. Rousseau;* Mornet, *Le sentiment de la nature en France de Rousseau à Saint-Pierre;* Hagmann, *Rousseau's Sozialphilosophie;* Fester, *Rousseau und die deutsche Geschichtsphilosophie.*

CRITICAL PHILOSOPHY OF IMMANUEL KANT

56. Immanuel Kant

Modern philosophy began with faith in the power of the human mind to attain knowledge; the only thing in question was *how,*—by what method,—it could be reached and how far

its limits extended. Empiricists and rationalists alike conceived genuine knowledge as universal and necessary, and nearly all of them down to Hume declared that self-evident propositions were possible in some fields. Descartes, Hobbes, Spinoza, and Leibniz constructed systems of metaphysics which they deemed as logic-proof as the Euclidean geometry. Bacon did not offer a universal theory: that was an enterprise that could not be undertaken until the facts had been established by the new method; but he held that the existence of God could be demonstrated and the eternal essences of things or laws of nature discovered. Nevertheless, doubts began to arise concerning the competence of human intelligence to solve ultimate problems or even problems of lesser scope. At times, metaphysics and theology seemed to Bacon to transcend the powers of natural reason. Hobbes, too, agreeing with Descartes that experience could not give us certainty and yet regarding sensation as the source of all we know, betrayed occasional misgivings with respect to a genuine science of physics. Locke saw the necessity of examining the knowledge-problem more thoroughly than it had been examined, and reached the conclusion that we possess *certain* knowledge of the agreement and disagreement of our ideas, certain knowledge of our own existence and of the existence of God, and that mathematics and ethics are secure. But we have no such knowledge, he held, of the existence of an external world and of the necessary connection of the qualities of things: true knowledge is out of the question in natural science. Berkeley declares that there is no external (material) world to know, but that we know ideas, spirits, and relations between ideas. Bayle plays havoc with theological and metaphysical doctrines, holding them to be not only beyond reason but contrary to reason. Hume draws what appear to him to be the consequences of the sensationalistic view of knowledge: if we can know only what we experience in sensation, then rational theology, rational cosmology, and rational psychology are impossible: knowledge of God, world, and soul is beyond our ken. Indeed, even our knowledge of matters of fact can yield nothing but probability; we have no knowledge of necessary connection, no knowledge of substance, no knowledge of a self: we cannot even say that our ideas *neces-*

Progress of Modern Philosophy

sarily follow the order in which we experience them, and which we *believe* they will repeat. We can attain "a kind of demonstrative knowledge" by comparing our ideas, noting their relations, and reasoning about the relations; and nothing more.

Mysticism

The spirit of criticism which had undermined authority and tradition and enthroned reason was now bringing reason itself to the bar and denying reason's authority. It was not the empiricists alone, however, who were weighing rationalism in the balance and finding it wanting; protests against its supposed pretensions and results also came from the camp of the mystics and faith-philosophers, who distrusted the deliverances of the intellect and sought in other phases or functions of the human soul a means of stilling the longing for certainty. According to them, the discursive understanding can never pierce the covering of reality; truth has its source in feeling, faith, or mystical vision of some sort; the deepest realities cannot be conceived by reason, but only felt by the heart. What particularly provoked such anti-rationalistic outbursts as these in the modern era was the mechanistic and deterministic world-views to which scientific or rationalistic thinking seemed inevitably to lead and which degraded the individual to the rôle of a marionette. To many minds the unaided natural intelligence appeared to end either in a hopeless and cheerless skepticism or in a tragic fatalism that mocked humanity's deepest yearnings and rendered fictitious its most precious values.

Problem of Kant

To the intellect's destructive criticism of its own competence and the will's demand for the recognition of its moral and religious values, philosophy was now compelled to make some answer. This task was assumed by Kant, who sought to do justice to the various currents of his age, to the Enlightenment, empiricism, skepticism, and mysticism; his problem was, as one of his contemporaries put it, "to limit Hume's skepticism on the one hand, and the old dogmatism on the other, and to refute and destroy materialism, fatalism, atheism, as well as sentimentalism and superstition." He himself had come from the rationalistic school of Wolff, but he had also been attracted to English empiricism and Rousseau, and Hume had "aroused him from his dogmatic

slumbers."* He sees the pressing need of an examination or criticism of human reason, of a tribunal, as it were, that shall secure the just claims of reason and dismiss all its groundless claims,—of a theory of knowledge, in other words, that shall investigate the possibility or impossibility of universal and necessary knowledge, its sources, extent, and boundaries. Philosophy, he thinks, has been dogmatic thus far: it has proceeded *without previous criticism of its own powers.* It must now become *criticism,* or enter upon an impartial examination of the faculty of reason in general; with this end in view Kant writes his three *Critiques:* the *Critique of Pure Reason,* an examination of theoretical reason or science; the *Critique of Practical Reason,* an examination of practical reason or morality; the *Critique of Judgment,* an examination of our æsthetic and teleological judgments, or purposiveness in art and in nature.

Genuine knowledge Kant defines as universal and necessary knowledge. He agrees with the rationalists that there is such knowledge,—in physics and mathematics,—with the empiricists that it is ideal knowledge, not knowledge of things as they are in themselves, but knowledge of phenomena, knowledge of things as they appear to our senses; hence a rational metaphysics (cosmology, theology, psychology) is impossible. With the empiricists he also agrees that we can *know* only what we experience, that sensation forms the matter of our knowledge; with the rationalists that universal and necessary truth cannot be derived from experience. The senses furnish the materials of our knowledge, and the mind arranges them in ways made necessary by its own nature. Hence, we have universal and necessary knowledge (rationalism) of the order of ideas, not of things-in-themselves (skepticism). The contents of our knowledge are derived from experience (empiricism), but the mind *thinks* its experiences, *conceives* them according to its *a priori* or native, that is, rational, ways (rationalism). Nevertheless, things-in-themselves exist; we can *think* them, but not *know* them as we know the facts of the empirical world. If it were not for the moral consciousness or practical reason, the

* For the development of Kant's critical philosophy see works of Paulsen, Caird, and Riehl mentioned in bibliography, p. 396; also Paulsen, *Entwicklungsgeschichte der kantischen Erkenntnisstheorie;* Boehm, *Die vorkritischen Schriften Kants.*

questions concerning the existence of a world other than the causal space and time order, of God, freedom, and immortality, would be left unanswered, indeed, could not even be broached.

Immanuel Kant was born in Königsberg, 1724, the son of a saddler, and was reared in religious surroundings, his parents being pietists. Nearly his entire life as student, teacher, and writer was spent within the boundaries of his native city. At the *Collegium Fredericianum,* where he prepared for the university (1732-1740), he was chiefly interested in the Roman classics; at the University of Königsberg he studied physics, mathematics, philosophy, and theology (1740-1746). From 1746 to 1755 he served as tutor in several families residing in the neighborhood of Königsberg; in 1755 he received an appointment as private docent at the University and lectured on mathematics, physics, logic, metaphysics, ethics, physical geography, anthropology, natural theology, and "philosophical encyclopedia." From 1766 to 1772 he combined with this position the post of assistant librarian of the Royal Library. In 1770 Kant became professor of logic and metaphysics, a place which he held until 1797, when his feeble condition made it necessary for him to retire. He died in 1804.

During his earlier years Kant followed the Leibniz-Wolffian philosophy, which dominated the German universities and had become popular outside of academic circles. From 1760 to 1770 he came under the influence of English empiricism; Locke and Shaftesbury, and then Hume, made a great impression on him; it was the latter who "aroused him from his dogmatic slumbers," as he says. By the year 1770 he had reached the philosophical standpoint for which he is noted, and presented it in a Latin dissertation, *De mundi sensibilis atque intelligibilis forma et principiis;* the next ten years he spent in working it out. His master-work, *Kritik der reinen Vernunft,* appeared in 1781 (2d., revised edition, 1787) and was followed by *Prolegomena zu einer jeden zukünftigen Metaphysik,* 1783, *Grundlegung zur Metaphysik der Sitten,* 1785, *Metaphysische Anfangsgründe der Naturwissenschaft,* 1786, *Kritik der praktischen Vernunft,* 1788, *Kritik der Urtheilskraft,* 1790, *Die Religion innerhalb der Grenzen der blossen Vernunft,* 1793, *Metaphysik der Sitten* (containing his philosophy of law), 1797, *Zum ewigen Frieden,* 1795. *Über die Pedagogik* was published in 1803.

Works ed. by Hartenstein, 10 vols., 1838, ff.; by Rosenkranz, 12 vols., 1838, ff.; by Kehrbach in Reclam *Universal-Bibliothek;* recent new editions by Prussian Academy, 11 vols.; by Cassirer, 12 vols.; by Vorländer, 9 vols. See also B. Erdmann, *Reflexionen Kants zur kritischen Philosophie,* 1882, ff., and Reicke, *Lose Blätter aus Kants Nachlass,* 1889, ff. Separate ed. of *Critique of Pure Reason* by Kehrbach (based on Kant's first ed.), by Erdmann, and Adickes (both based on second ed.).

Translations: *Critique of Pure Reason* (of 2d ed.) by Meiklejohn, 1854; (of 1st ed. with supplements of 2d) by Max Müller, 1881; paraphrase by Mahaffy and Bernard; *Dissertation* of 1770, by Eckoff; of *Prolegomena,* by Mahaffy and Bernard; *Foundations of Metaphysics of Morals, Critique of Practical Reason,* parts of *Metaphysics of*

Morals, and first part of *Religion,* by Abbott, in one vol.; *Religion,* by Semple; *Metaphysical Foundations of Natural Science,* by Bax; *Cosmogony,* by Hastie; *Critique of Judgment,* by Bernard; *Philosophy of Law, Principles of Politics,* and *Perpetual Peace,* by Hastie; *Perpetual Peace,* by M. C. Smith; *Pedagogy,* by Churton; *Dreams of Ghost-Seer,* by Goerwitz; *Selections,* by Watson; a paraphrase of *Critique of Pure Reason,* by Fogel and Whitney. Müller's translation has been made use of in our account.

Paulsen, *Kant,* transl. by Creighton and Lefevre; Wenley, *Kant and his Revolution;* W. Wallace, *Kant;* Adamson, *Philosophy of Kant;* Watson, *Philosophy of Kant Explained;* Weir, *Student's Introduction to Kant;* Green, *Lectures on the Philosophy of Kant,* vol. II of *Works;* Sidgwick, *Lectures on the Philosophy of Kant;* E. Caird, *Critical Philosophy of Kant,* 2 vols.; K. Fischer, *Kant,* 2 vols.; recent German monographs by Kronenberg, Simmel, Adickes, Külpe, Wernicke. Morris, *Kant's Critique of Pure Reason;* Prichard, *Kant's Theory of Knowledge;* Riehl, *Philosophical Criticism,* vol. I; Stirling, *Text-Book to Kant;* K. Lasswitz, *Lehre Kants von der Idealität des Raumes und der Zeit;* Volkelt, *Kants Erkenntnisstheorie;* Cohen, *Kants Theorie der Erfahrung;* Vaihinger, *Commentar zu Kants Kritik der reinen Vernunft,* 2 vols.; E. Pfleiderer, *Kantischer Kritizismus und englische Philosophie;* Wartenberg, *Kants Theorie der Kausalität.* F. Adler, *Critique of Kant's Ethics,* in *Essays in Honor of W. James;* Porter, *Kant's Ethics;* Schurman, *Kantian Ethics and the Ethics of Evolution;* Messer, *Kants Ethik;* Cohen, *Kants Begründung der Ethik,* 2d ed.; Cresson, *Morale de Kant;* Delbos, *Philosophie pratique de Kant;* Hegler, *Psychologie in Kants Ethik;* Foerster, *Entwicklungsgang der kantischen Ethik;* Schmidt, *Entwicklung der kantischen Ethik;* Thilly, *Kant and Teleological Ethics, Kant-Studien,* vol. VIII, 1; Sänger, *Kants Lehre vom Glauben;* Pünjer, *Religionslehre Kants.* Tufts, *Kant's Teleology;* Meredith, *Kant's Critique of Judgment;* Stadler, *Kants Teleologie;* Cohen, *Kants Begründung der Aesthetik.* Bowne, *Kant and Spencer;* Lovejoy, *Kant and the English Platonists,* in *Essays in Honor of W. James;* Uphues, *Kant und seine Vorgänger;* Bauch, *Luther und Kant;* Meyer-Benfey, *Herder und Kant;* Saisset, *Ænésidème, Pascal, Kant;* Spicker, *Kant, Hume und Berkeley;* Sydow, *Kritisches Kant-Kommentar.*

Works on entire idealistic movement in Germany: Royce, *Spirit of Modern Philosophy;* Pringle-Pattison, *From Kant to Hegel;* Kronenberg, *Geschichte des deutschen Idealismus,* 3 vols. (vol. I on pre-Kantian idealism); Liebmann, *Kant und die Epigonen;* works by Chalybæus, Fortlage, Harms, Biedermann, Michelet, Willm, Drews. See also Pfleiderer, *Development of Rational Theology since Kant.* Bibliography on Kant by Adickes, *Phil. Rev.,* vol. II.

The fundamental problem for Kant is the problem of knowledge: What is knowledge, and how is it possible? What are the boundaries of human reason? In order to answer these questions, we must examine human reason, or subject it to criticism.

Knowledge always appears in the form of judgments, in which something is affirmed or denied. But not every judgment is knowledge; in an *analytical judgment* the predicate merely elucidates what is already contained in the subject: *e.g.,* Body is an extended thing. The judgment must be synthetic; that is, add something to the predicate, *extend* our knowledge, not merely elucidate it: *e.g.,* All bodies have specific gravity. Not all synthetic judgments, however, give us knowledge; some are derived from experience; they inform us, for example, that an object has such and such properties or behaves thus or so, but not that it *must* have these qualities, or behave so. In other words, such judgments are lacking in *necessity:* reason does not compel their acceptance, as it compels the acceptance of a mathematical proposition. Again, they are lacking in *universality:* we cannot say because some objects of a class have certain qualities, that *all* have them. Judgments lacking in universality and necessity, or *a posteriori* judgments, are not scientific. To be knowledge, a synthetic judgment must be necessary: its contradictory must be unthinkable; and it must be universal, *i.e.,* admit of no exceptions. Universality and necessity have their source not in sensation or perception, but in reason, in the understanding itself; we know without experience (and in this sense *prior* to it) that the sum of the angles of a triangle *must* be equal to two right angles and that it will always be so. In order to yield knowledge, therefore, a judgment must be *a priori.*

Problem of Knowledge

Our conclusion, then, is that knowledge consists in synthetic judgments *a priori.* Analytic judgments are always *a priori;* we know without going to experience that all extended things are extended; such judgments are based on the principles of identity and contradiction. But they do not add to our knowledge. Synthetic judgments *a posteriori* add to our knowledge, but are not sure; the knowledge they yield is vague, uncertain, problematic. We demand *apodictic certainty* in our sciences, and such certainty is possible only in *synthetic judgments a priori.*

That there are such judgments Kant never doubted for a moment: we find them in physics, in mathematics, and even in metaphysics. He accepts the existence of universal and necessary knowledge as an established fact, hence he does not ask

whether synthetic judgments *a priori* are possible, but only how they are possible. What are the conditions of such knowledge; what does the existence of such judgments logically presuppose or necessarily imply? The German criticist's method is, therefore, dogmatic, as he says: the theory of knowledge is a strictly demonstrable science, an *a priori* or *pure* science, one that bases its truths on necessary principles *a priori.* His method is not psychological, but logical or transcendental: he does not tell us to examine the conditions of knowledge in our own consciousness,—how it arises psychologically,—but to take real knowledge, say the propositions of mathematics or physics, and to ask ourselves what the existence of such propositions logically presupposes. What, for example, follows necessarily from the fact that there can be judgments at all, or judgments concerning space relations, or judgments affirming causal relations? There can be no synthetic judgment without a synthetic mind, no spatial judgment without a space-perceiving mind, no causal judgment without a mind thinking in terms of cause and effect. In employing this method Kant is, of course, employing human reason with all its categories, he is taking for granted the possibility and validity of knowledge,—that is, he is a dogmatist,—but this does not disturb him, since it would be a "scandal," as he declares, if Hume were right in denying the possibility of knowledge. We should simply never get anywhere if the competence of reason to examine itself had to be established before reason could undertake this task.

The problem, then, is: How are synthetic judgments *a priori* possible in mathematics, physics, and metaphysics, or, How are pure mathematics, pure physics, and pure metaphysics possible? Show how and why we can have genuine knowledge in these fields. In order to answer such questions, we must examine the organ of knowledge; we must consider its powers, its functions, its possibilities, its limitations. Knowledge presupposes a mind. We cannot think without having something to think about, and we can have no object of thought unless it is given through the senses, unless the mind is receptive or has sensibility. Sensibility furnishes us with objects or percepts (*Anschauungen,* intuitions; empirical intuitions Kant sometimes calls them). These objects must be *thought,* understood, or conceived by the

understanding; from it arise concepts. Knowledge would be impossible without sensation or perception and thinking or understanding. These two presuppositions of knowledge are fundamentally different, but supplement each other. "Percepts and concepts constitute the elements of all our knowledge." Percepts without concepts are blind, concepts without percepts are empty. All that the intellect can do is to elaborate what is given by sensibility. Perhaps the two faculties have a common root, but it is unknown to us.

The question, then, How is knowledge possible? divides into two questions: How is sense-perception possible? and How is understanding possible? The first question is answered in the *Transcendental Æsthetic* (doctrine of the faculty of perception), the second in the *Transcendental Logic* (doctrine of concepts and judgments). These together form the *Transcendental Doctrine of Elements.*

Let us take up, first, the *Transcendental Æsthetic.* What are the logical preconditions of the faculty of sensibility or of sense-perception? In order to perceive, we must have sensations (color, sound, hardness, etc.). But mere sensation would not be knowledge; sensation would be a mere modification of consciousness, a mere change occurring in consciousness, a mere subjective state produced in us by something else. Sensation must be referred to space and time, to a definite place in space and in time; it must be perceived as something outside, by the side of other things, as something coming before or after or with something else. Our sensations are arranged in a spatial and temporal order. Perception, therefore, presupposes matter or content (sensations) and form (space and time). Sensations constitute the raw material (colors, sounds, weight), which is arranged by sensibility into the framework or form of space and time, and so become percepts. The soul not only *receives* sensations, but by virtue of its faculty of intuition (*intueri:* to look at, envisage) *perceives* them: it sees the color, hears the sound, outside of itself, in space, and in a time-order. Sensibility possesses the power to perceive space and time *a priori;* indeed, the mind is so constituted that it perceives space and time even when there are no objects present; it not only perceives objects *in* space

Theory of Sense-Perception

and time but space and time themselves. In this sense, we can speak of *pure* perception.

The functions or forms of arranging sensations in space and time cannot themselves be sensations. They are not empirical or *a posteriori* forms of intuition, but inherent in the very nature of the soul,—*a priori*. Time is the form of the inner sense: that is, our psychic states cannot be apprehended otherwise than as following one another in temporal succession; while space is the form of the outer sense: we can apprehend spatially only what affects our sense-organs. But since everything given or presented to sense is a modification of consciousness and so belongs to the inner sense, time is a necessary condition of all ideas (*Vorstellungen*) or phenomena.

Space and time are not realities or things existing for themselves, nor are they qualities or relations belonging to things as such. They are ways our sensibility has of apprehending objects, they are forms or functions of the senses; if there were no beings in the world endowed with the intuition or perception of space and time, the world would cease to be spatial and temporal. "Take away the thinking subject and the entire corporeal world will vanish, for it is nothing but the appearance in the sensibility of our subject." We can never imagine that there is no space, although we can conceive that it contains no objects. That is, we are compelled to perceive and imagine in terms of space. Space is a necessary precondition of phenomena and hence a necessary *a priori* idea. This is an example of Kant's transcendental or metaphysical method, as he calls it. We cannot think things without space; we can think space without things; hence space is the necessary precondition of our ideas of things, or of the phenomenal world. Whatever is a necessary precondition must be an *a priori* form of the mind. The same remarks apply to time.

The question, then, How is pure mathematics possible? is answered: we have genuine knowledge, or synthetic judgments *a priori*, or self-evident truths, in mathematics because the mind has space and time forms, because it is by nature compelled to perceive and imagine in spatial and temporal ways.

But, remember, space and time are merely conditions of sensibility, forms of sense-perception, ways we have of perceiving

things, hence they have validity only when applied to perceived things, to appearances or phenomena, not when applied to things-in-themselves or to things independent of our perception of them. We cannot apply them outside of our world of ideas. But this leaves the certainty of our experiential knowledge untouched; knowledge is secure whether space and time inhere in things-in-themselves or are merely the necessary forms of our perception of things. The things we perceive are not things-in-themselves, as which we regard them, nor are the relations we perceive the relations of things-in-themselves. If we should take away the subject, or only sensibility, all the qualities and all the relations of things in space and time, indeed space and time themselves, would disappear. They could no longer exist as phenomena-in-themselves,—that is, we should no longer refer our sensations outward,—but only as sensations in us, as modifications of our consciousness. What things-in-themselves are apart from sensibility; what it is that causes sensations in us, what it is independently of its effect on our sense-organs, we do not know. When a thing strikes the eye, we have color; when the ear, sound; and so on. All these are sensations in us; what the thing as such (*das Ding an sich*) is apart from the effect produced on consciousness, we do not know. We know only our peculiar way of perceiving such things, a way that may not be necessary for all creatures though it is necessary for man. In this sense, space and time are subjective or ideal. They are real or objective, however, in the sense that all our phenomena are arranged in spatial and temporal order: no object can ever be given to us in experience that does not come under the condition of time; and all objects as external phenomena will always be coextensive in space.

To sum up. Real knowledge, as we human beings have it, would be impossible if it were not for several things. The mind must have something presented to it, it must be capable of being affected, or of receiving impressions. But if we merely received impressions or experienced modifications of consciousness, we should be shut up in our own subjectivity, we should not perceive an objective world. Our sensations must be objectified, referred outward, projected into space, as it were,—arranged in a spatial and temporal order. It is only because the human

mind possesses these ways of perceiving, that there can be an objective world as we perceive it.

This, however, is not enough. Mere unrelated, disconnected percepts would not be knowledge. The mere perception of objects in space and time would not yield knowledge. The mere perception of the sun followed by the perception of a hot stone is not the same as knowing that the sun heats the stone. Only by connecting these two experiences in thought in a certain way, can I form the judgment that the sun is the cause of heat in the stone. Objects must be connected, related, conceived, or thought. Knowledge or judgment would be impossible without a synthetic, thinking mind, that is, without understanding (*Verstand*) or intelligence. Reason is not only receptive, but active, spontaneous. Intuition is perceptual, understanding conceptual: it thinks in concepts. We must make our percepts intelligible, or bring them under concepts, as well as make our concepts sensible, or give them an object in perception. The understanding by itself cannot *intuit* or perceive anything; the senses by themselves cannot *think* anything. Knowledge is possible only in the union of the two. The science of the rules of sensibility is called *Æsthetic;* the science of the rules of the understanding is called *Logic.*

Theory of the Understanding

The understanding has different forms of conceiving or relating or connecting percepts; they are called pure concepts or categories of the understanding, because they are *a priori* and not derived from experience. The understanding expresses itself in judgment; indeed, understanding is a faculty of judgment: to think is to judge. Hence, its ways of conceiving will be ways of judging, and to discover these ways of judgment we must analyze our judgments, examine the forms in which they appear. Since our common logic has already done this for us, we can go to it for help here. The logical table of judgments will serve as a guide to the discovery of the categories. There are as many pure concepts of the mind, or categories, as there are possible judgments in the table of judgments. The part of logic which deals with this subject is called *Transcendental Analytic.*

Kant finds that there are twelve kinds of judgments: (1) the

universal judgment (All metals are elements); (2) the particular judgment (Some plants are cryptogams); (3) the singular judgment (Napoleon was Emperor of France). In these judgments we conceive things in terms of the category of quantity: totality, plurality, unity. (4) The affirmative judgment (Heat is a form of motion); (5) the negative judgment (Mind is not extended); (6) the unlimited judgment (Mind is unextended). These express the category of quality: reality, negation, limitation. (7) The categorical judgment (The body is heavy); (8) the hypothetical judgment (If the air is warm, the thermometer rises); (9) the disjunctive judgment (The substance is either solid or fluid). These judgments express the category of relation: inherence and subsistence (substance and accident), causality and dependence (cause and effect), and community (reciprocity between the active and the passive). (10) The problematical judgment (This may be a poison); (11) the assertory judgment (This is a poison); (12) the apodictic judgment (Every effect must have a cause). These judgments express the category of modality: possibility or impossibility, existence or non-existence, necessity or contingency.

Validity of Judgments

The problem arises, What right have we to apply these forms of the mind to things? What is their objective validity? They have a purely mental origin and yet they are employed in experience. We read our categories, which are independent of experience in the sense of not being derived from experience, *into* experience, into the world of objects. How is that possible; what right have we to do it? Jurists call the proof of rights and claims in a legal process the *deduction.* What we need here is a deduction or proof or justification, a transcendental deduction of the categories. Kant's proof consists in showing that without them intelligent experience would be impossible. There could be no knowledge, no connected world of experience, without such original *a priori* acts of thought, without a unified and unifying consciousness or self-consciousness, or the synthetic unity of apperception, as Kant calls it, which operates with these categories. Understanding is judgment, the act of bringing together in one self-consciousness (unity of apperception) the many perceived objects. Without a rational mind that perceives in cer-

tain ways (space and time) and judges or thinks in certain ways (categories), that is so organized by nature (*a priori*) that it must perceive and judge as it does, there could be no universal and necessary knowledge of objects of experience. Knowledge is the application of pure concepts of the understanding, or categories, to objects furnished us by the senses and perceived as spatial and temporal. Categories serve to make experience possible; that is their sole justification.

So simple an act as the perception of the freezing of water, for example, would be impossible unless the mind apprehended two states (liquid and solid) as related in time and connected them in a single act of thought. The same synthetic unity of apperception which is necessary in order that we may have judgment is necessary in order that we may have perception, in order that we may apprehend. The same spontaneous acts of recognition, reproduction, and imagination that operate in our thinking operate in sense-experience; and the same categories are at work in them both. Our world of experience is made possible by the categories; the phenomenal order, or nature as we perceive it, depends on the forms of our intelligence, not vice versa, as the empiricists hold. This is what Kant means when he says that the understanding prescribes its laws to nature; this is the Copernican revolution which he introduced into philosophy.

Since, then, the mind prescribes its laws to nature, it follows that we can know *a priori* the universal forms of nature. We can know that the perceived world will always be connected in certain intelligible ways, that our experiences will always be of spatial and temporal things in fixed order, of things related as substance and accident, cause and effect, and as reciprocally influencing one another. We cannot, therefore, go wrong in applying the categories to the world of sense. But, let it not be forgotten, they can be legitimately employed *only* in the field of actual or possible experience, only in the phenomenal world; their use is not valid outside of this sphere; we cannot transcend experience or have conceptual knowledge of the supersensuous, of things-in-themselves. It also follows from this theory that we cannot know *a priori* the matter or contents of experience, what particular sensations (colors, sounds, weight, etc.)

will be given; all we can say is that whatever they may be, the mind will organize them according to its necessary rules.

But how can categories, which are intellectual, be applied to percepts, to sensible phenomena? Pure concepts and sense-percepts are absolutely dissimilar, or heterogeneous, according to Kant; how, then, can we get them together? There must be a third something, a *mediating* idea between the pure concepts and the sense-perceptions, something that is pure (without anything empirical) and, at the same time, sensuous. This something Kant calls the *transcendental schema,* which is used to connect or relate our experiences. The employment of such a schema is the *schematism of the understanding.* The time-form fills the requirements laid down: it is both pure and sensuous. All our ideas are subject to the time-form,—that is, all our experiences are ordered by us in time: they take place in time. Hence, if the intellect is to influence sensibility at all, if it is to relate sense-experiences or connect them, it must make use of the time-form. It tries to *image* its concepts, its categories, its uniform ways of connecting and relating, by means of the pure time-form, that is, to imagine them in certain time-relations. For example, it successively adds one to one, or considers time as a series of homogeneous moments, thus getting number. This operation of numbering, adding one to one, is the schema of the category of quantity,—this category expressed in the form of time. One moment of time expresses singularity; several moments express particularity; all, or the totality of moments, universality. The category of quantity is expressed in the schema of *time-series.* The intellect also imagines sensations occurring in time, a content in time, something in time, or it imagines nothing in time. This is its way of picturing to itself the category of quality: the concept of quality is expressed in the schema of *time-content.* The intellect looks upon the real in time, the content, as something that remains when everything else changes. This is the way it imagines the category of substance. It considers the real as something upon which something else invariably follows in time: this is its way of making perceivable the category of causality. Or it regards the qualities of one substance and the qualities of another as invariably appearing together in time: this is its way of imaging the cate-

gory of reciprocal action. The categories of substance, causality, and reciprocal action are expressed in the schema of *time-order* (permanence, succession, simultaneity). Or it thinks of something as existing at any time (category of possibility), at a definite time (actuality), at all times (necessity). The categories of possibility, actuality, and necessity are expressed in the schema of *time-comprehension.*

Knowledge of Things-in-Themselves

As has been pointed out, we cannot transcend our experience or have *a priori* knowledge of the supersensible, of things-in-themselves, of things as they are apart from the way they affect consciousness. Knowledge implies perception, and things-in-themselves cannot be perceived by the senses: in sense-perception only the way they appear to consciousness is made known. Nor can they be perceived or intuited by the intellect; we do not possess *intellectual* intuition, we cannot see things face to face, at one glance, in the *mind's* eye, as it were; the intellect is discursive, not intuitive. If we apply categories to such a thing-in-itself, we cannot justify them: we cannot prove, for example, that everything that exists exists as a substance in an intelligible world. We can, however, *think* such a thing-in-itself, speak of it as something to which none of the predicates of sense-perception applies; say that it is not in space or in time, that it does not change, and so on. Not a single category, however, can be applied to it, because we have no means of knowing whether anything corresponding to it exists. We should never know whether anything existed corresponding to the notion of substance if perception did not furnish us with a case in which the category is applied. In the case of the thing-in-itself, however, perception leaves us in the lurch.

The notion of a thing-in-itself is unknowable. But it is not a contradictory concept, for we surely cannot maintain that the phenomenal order is the only possible form of perception. We can have sensible knowledge only of sensible things, not of things-in-themselves; the senses cannot presume to know everything the intellect thinks. The concept of the thing-in-itself, or *noumenon,* as something not knowable by the senses (but the possibility of knowing which in *intellectual* intuition is thinkable) is, therefore, a *limiting concept;* it says to the senses: here

is your limit, you can go no further, here is where your jurisdiction ceases. You can know only phenomena; the non-phenomenal, the noumenal, the intelligible is beyond you.

I know things not as they are in themselves, but only as they appear to me. Similarly, I do not know *myself* as I am, but only as I appear to myself. I am conscious of my existence, of my activity, of my spontaneity. But consciousness of oneself is not knowledge of one's *self*. To know is to have percepts. I do not perceive my self, my ego, nor do I possess an intellectual intuition of my self; I see myself through the glasses of perception, that is, through the time-form, as a succession of states. But though I cannot know the ego in the sense of *perceiving* it, I can *think* it. Indeed, Kant's whole theory of knowledge is based on the thought of such an ego: the synthetic unity of apperception is nothing but the self-conscious self. There can be no knowledge without a self-conscious, unifying self; but this self itself cannot be known in the sense of being perceived directly.

We cannot, therefore,—that is now plain,—have universal and necessary or *a priori* knowledge of anything non-perceivable. Hence, we cannot have a metaphysic that transcends experience, a metaphysic of things-in-themselves, a metaphysic that can offer us genuine knowledge of a non-phenomenal world,—free will, immortality, and God. But we can have *a priori* science of the phenomenal order, for the reasons already mentioned. Mathematics owes its necessity to the forms of space and time, geometry being based on *a priori* space-perception, arithmetic on the notion of number, which expresses *a priori* time-perception. Natural science rests on the categories: in it we speak of substance and accident, cause and effect, interaction, and so forth. Hume and the empiricists are wrong. We can have universal and necessary knowledge in mathematics and in physics, but it is knowledge of phenomena only, and knowledge only of the form and arrangement of phenomena. We cannot know things-in-themselves; in this Hume is right. Things-in-themselves, however, exist; indeed, they must exist, otherwise sensation is unexplainable. Corresponding to phenomena there must be something that appears, something *extra mentem,* something that affects our senses and supplies the matter of our

knowledge. Kant does not, for a moment, doubt the existence of such a thing-in-itself. In the second edition of the *Critique* he even proceeds to *prove* its existence (Refutation of Idealism). But, after his strong insistence that it exists and that it is the ground of our sensations, he is compelled by the nature of his system to make it a very uncertain and hazy factor. It becomes a limiting concept, a kind of check to the pretensions of sense-knowledge: we cannot know the supersensible by means of the senses. Then, again, we are told that although we cannot *know* it, we can *think* it: we can deny categories of it. Or we can apply categories to it, but these categories have no objective validity when so applied. Here was a problem which had to be worked out, and to this Kant himself gave further attention and to this his successors addressed themselves with zeal, as we shall see.

The aim of Kant was to show, first, against the "skeptic" Hume, that we can have knowledge in mathematics and physics; second, against the Leibniz-Wolffian "dogmatists," that we cannot have knowledge of the supersensible in metaphysics, that metaphysics in this sense is a pseudo-science.* To the second part of his problem we now turn. The understanding can *know* only what can be experienced; but reason strives to go beyond the confines of the understanding, and attempts to conceive the supersensible, that for which we have no object in perception, that which is merely thought. It confuses percepts with mere thought, and in this way falls into all kinds of ambiguities, equivocations, false inferences, and contradictions. That is what happens in the metaphysics of the transcendent. Questions which have a meaning when asked with respect to our world of experience have none when we transcend phenomena. Notions like cause and effect, substance and accident, which are perfectly legitimate when applied to the phenomenal order, have no meaning when transferred to a noumenal world. Meta-

Impossibility of Metaphysics

* There are, however, several senses in which he regards metaphysics as possible: (1) as a study of the theory of knowledge; (2) as absolute knowledge of the forms and laws of nature; (3) as absolute knowledge of the laws or forms of the will, *i.e.*, as moral philosophy; (4) as knowledge of the spiritual world, based on the moral law; (5) as a *hypothesis* of the universe, having a certain degree of probability.

physics too often forgets this, confusing phenomena with noumena, and so comes to predicate of the transcendent, concepts which are valid only in our world of sense. In this way it falls into error and illusion, which, as involving principles of the understanding, Kant calls transcendental illusion. He calls the principles which are applied within the confines of possible experience *immanent* principles, those which transcend these limits *transcendent* principles, or concepts of reason, or *Ideas.* It is an inevitable illusion of reason to mistake our subjective principles, which apply to sensations, for objective principles, and to apply them to things-in-themselves. It is the business of *Transcendental Dialectics* to discover the illusion of such transcendent judgments and to prevent such illusion from deceiving us. It cannot, however, destroy the illusion, for the illusion is natural and inevitable; we may see through it and avoid being deceived by it, but we cannot get rid of it.

A careful examination of the arguments of metaphysics will reveal a lot of logical fallacies, equivocations, nonsequiturs, and contradictions. As we saw before, the understanding is the name given to the faculty of the mind, or reason in general, which connects our experiences in uniform ways, according to rules or principles, thus furnishing us with many judgments. These judgments may, in turn, be embraced under more comprehensive *a priori* concepts. The faculty of the mind which is engaged in this work is Reason as a faculty of subsuming the rules of the understanding under higher principles. Reason (*Vernunft*), in this sense, aims at a unification of judgments of the understanding. But such higher principles are merely subjective laws of economy for the understanding, striving to reduce the use of concepts to the smallest possible number. This supreme Reason does not prescribe laws to *objects* nor does it explain our knowledge of them.

Thus, Reason strives to bring all mental processes under a general head, or Idea of a *soul,* in rational psychology; all physical events under the Idea of *nature* in rational cosmology; all occurrences in general under the Idea of a *God* in rational theology. The notion of God would, therefore, be the highest Idea, the highest unity, the one absolute Whole comprehending everything else. Such Ideas, however, are *transcendent,* beyond

experience: they have no empirical value or use. Thus, we can never represent the Idea of an absolute Totality in the form of an image; it is a problem without a solution. Yet these Ideas have their value and use as guides to the understanding, they lead it onward in its pursuit of knowledge.

(a) *Rational Psychology.* Thus, it is legitimate to conclude that there can be no knowledge unless there is a subject, self, or knower, unless thoughts come together in a *single* consciousness, and unless the self that thinks the subject is the same self that thinks the predicate, in a judgment. But we have no right to infer that this knower is a self-existent, simple, indecomposable self-identical soul-substance, one that remains the same in all change. In reasoning thus, rational psychology draws conclusions not warranted by the premises; it uses the terms (self or subject and soul) in different senses, and is guilty of a fallacy, which Kant calls a paralogism. We cannot prove, theoretically, the existence of free will and an immortal soul. Still, although rational psychology does not add anything to our knowledge, it prevents us from adopting either a soulless materialism or a groundless spiritualism. Reason here gives us a hint to turn from fruitless speculations and to put our self-knowledge to moral use. The moral law teaches man to esteem the mere consciousness of righteousness more than anything else in the world, and to render himself fit to become the citizen of a better world, which exists in his Idea only.

(b) *Rational Cosmology.* Reason also tries to reduce the objective conditions of all our phenomena to an ultimate and supreme condition, or an unconditioned. We form the Idea of nature as a whole, the Idea of a *universe,* and either conceive this as the principle on which all phenomena depend, or we seek the unconditioned among the phenomena themselves. In either case we form cosmological Ideas, and involve ourselves in all kinds of antitheses, which Kant calls *antinomies:* sophistical propositions which can neither hope for confirmation nor need fear refutation from experience. The thesis is free from contradiction and is rooted in the necessity of reason, but, unfortunately, the antithesis can produce equally cogent and necessary grounds for its support.

There are four such antinomies in which both the thesis and

the antithesis can be proved. It can be proved (1) that the world has a beginning in time, and that it has no beginning in time, or is eternal; that it is limited in space, and that it is unlimited in space; (2) that bodies are infinitely divisible, and that they are not infinitely divisible, that there are simple parts in them, which cannot be further divided (*atoms*); (3) that there is freedom in the world, and that everything in the world takes place according to the laws of nature; (4) that there exists an absolutely necessary Being belonging to the world, either as part or as cause of it; and that there is no such Being, either within or without the world, as the cause of it. In preferring one side to the other, the participants do not consult the logical test of truth, but only their own interest. Every right-thinking man has a certain practical interest in the thesis, or dogmatism, if he knows his true interests. That the world has a beginning, that my thinking self is simple and imperishable, that it is free and not subject to the compulsion of nature, that the whole order of things, which constitutes the world, springs from an original Being whence everything receives its unity and purposeful connection,—these are so many supports of ethics and religion. The antithesis, or empiricism, robs us, or seems to rob us, of all these supports. If there is no original Being different from the world; if the world is without a beginning and, therefore, without a Creator; if our will is not free, and our soul is divisible and perishable like matter, our moral Ideas and principles lose all validity and fall with the transcendental Ideas which form their theoretic support.

There is also a speculative interest involved. For if we assume the transcendental Ideas in the thesis, we can conceive *a priori* the whole chain of conditions and the derivation of the conditioned by beginning with the unconditioned. The antithesis does not accomplish this. Yet, if the empiricist were satisfied with putting down presumption and rashness, his principle would serve to teach moderation in claims. We should not be deprived of our own intellectual *presumptions* or our *faith* in their influence on our practical interests. They would merely have lost the pompous titles of science and rational insight, because true speculative *knowledge* can never have any other object than experience. But empiricism itself becomes dogmatic

and boldly denies what goes beyond the sphere of intuitive knowledge, which does irreparable injury to the practical interests of reason.

Kant solves the difficulties involved in the antinomies by pointing out that the antithesis holds for the phenomenal world, and the thesis for the noumenal world. Our sense-perceived, spatial-temporal world has no first beginning in time and no extreme limit in space. We never *experience* absolute limits; we can never stop anywhere in the *regressus* of time or in the *progressus* of space. But there may be a non-spatial world in which absolutely simple beings exist, a world of spiritual entities. It does not follow that because a limit is impossible in the one world, it is also impossible in the other. For all we know, the true world may have had a beginning, have been created by God, and be limited. Still, we have no right to search for spiritual beings in space and for spatial things in the supersensible realm.

In the same way, the causal antimony is solved. In the *phenomenal* series, everything is conditioned by something like it, every effect has a phenomenal cause; no breach is possible in the causal nexus. It is our business to go right on in the chain *ad infinitum*. Still, it is conceivable that a phenomenal condition has also an *intelligible* or noumenal condition, that there is something outside of the phenomenal series on which the phenomenally conditioned depends. It is settled by the nature of our intelligence that we shall never *find* a free cause in the sense-world, hence we cannot derive the Idea of freedom from experience. It is a transcendental Idea because reason creates it independently of experience. It is easy to see, however, that if all causality in the world of sense were merely natural causality, every event would be necessarily determined by some other event, every act would be a necessary natural effect of some phenomenon in nature. The denial of transcendental freedom, of spontaneity, would destroy practical or moral freedom. Practical freedom presupposes that although something did not happen, it *ought* to have happened, hence that its phenomenal cause was not absolutely determining, that our will could have produced it independently of its natural causes and even contrary to their power and influence. If transcendental freedom

is possible, practical freedom is possible: the will may be independent of the coercion of sensuous impulses, not necessitated as is the will of the brute.

In such a way freedom and natural necessity could be reconciled. We can regard the phenomena as caused by the thing-in-itself, the intelligible cause, which is not perceived, but whose acts, the phenomena, are perceived and arranged in the unbroken causal series. One and the same phenomenon, looked at as part of the phenomenal world of space and time, would then be a link in a causal chain; looked at as the act of the non-perceived thing-in-itself, it would be the act of a free cause, which originates its effects in the world of sense *by itself*. On the one side, the event would be an effect of nature only; on the other, an effect of freedom. In other words, this effect is a phenomenon and must have an empirical cause, but this empirical cause itself can be the effect of a non-empirical cause, or intelligible cause, or free cause, without breaking, in the least, its connection with natural causes.

Applying this teaching to man, we would have the following result. Looked at through the spectacles of sense and understanding, man is a part of nature; in this sense he has an empirical character, he is a link in a chain of causes and effects. But in reality man is an intelligible or spiritual being. To such a being the sense-forms do not apply; such a being can *originate* acts. And man is aware of this power, in that he holds himself responsible. Whenever we think of an act as a phenomenon, we cannot regard it as beginning by itself, it must have a cause. We cannot, however, regard reason in that way, we cannot say that the state in which reason determined the will was preceded by another state, and so on. For reason is not a phenomenon, and therefore not subject to any of the conditions of sensibility (time, space, causality). Hence, we cannot interpret its causality in the natural way, that is, expect a cause for everything it does. Reason, or the intelligible, or man as he is in himself, is the permanent condition of all his voluntary acts. The empirical character is only the sensuous schema of the intellectual character, that is, the way we *image* man, phenomenalize him.

This shows Kant's meaning clearly. Every voluntary act is

the direct effect of the intelligible character, of pure reason; hence, man is a free agent, he is not a link in the chain of natural causes. Yet the act itself, when looked at as a phenomenon, is absolutely determined. The man in himself is a free agent, he originates acts; but when these acts are perceived by a mind, that mind weaves them into a web of causes, puts something before them and after them, makes them the effects of particular impulses, ideas, education, natural disposition, and so on. But the real cause of the act is reason; the action is imputed to the man's intelligible character, which shows that we imagine that reason is not affected at all by the influences of the senses, and that it does not change.

In the *Critique of Pure Reason,* however, Kant does not aim to establish the reality of freedom or even to prove the possibility of freedom. He simply wishes to point out that reason creates the Idea that it can begin, absolutely, a causal series and, at the same time, prescribes laws of causality to the understanding, or involves itself in an antinomy; and to prove that nature does not contradict the Idea of free causality.

The antinomy of necessary Being and contingent being Kant solves thus. The intellect refuses to regard anything as necessary or independent within the phenomenal series; everything is contingent or accidental, that is, depends on something else. But this would not be denying that the *whole* series may depend on some intelligible Being, which is free, independent of all empirical conditions, and itself the ground of the possibility of all these phenomena. We can regard the whole world of sense as the expression of some intelligible Being, which is the substance, the necessary Being without which nothing can exist, and which needs nothing in order that it may exist. The intellect must not say that because the intelligible is useless in explaining *phenomena,* it is, therefore, impossible. Such a Being may be impossible, but it does not follow from what we have found to be true of the understanding, that it is impossible. When we are speaking of phenomena, we must speak in terms of sense, but that is not necessarily the only way of looking at things; we can conceive of another order of existence, of an order of things-in-themselves, of non-sensuous thought-things,

of things not as they appear to the senses, but as we can think them. We are bound to assume something intelligible on which phenomena depend, but we *know* nothing of such objects; all we can do is to form some kind of notion of them, conceive them by analogy with the ways in which we use concepts of experience.

(c) *Rational Theology.* We form the Idea of an empirical whole, of a whole of experience, and we conceive this *system* of objects, this universe of things, or phenomena, as something existing apart from us. We forget that it is our Idea, and so make an entity of it. We represent it as an *individual* thing, containing in itself all reality: as the most real thing, as the highest reality, all-sufficient, eternal, and simple. This idea Kant calls the ideal of a transcendental theology. The ideal of the most real Being, however, is a mere Idea. First we make an object of it, that is, a phenomenal object, then we make an entity of it, and then we personify it.

There are only three proofs for the existence of God, the physico-theological, the cosmological, and the ontological, all of which are worthless. To take the ontological argument: The conception of a Being that contains all reality does not imply existence. Existence does not follow from the notion of the most real being: here we spin out of an entirely arbitrary Idea the existence of an object corresponding to it. In the cosmological proof, we conclude from the Idea of all possible experience (world or cosmos) the existence of a necessary Being. God alone can be conceived as such a Being. We have no right, however, to conclude that because we think there must be an absolute Being, such a Being exists. This is really the ontological proof over again. Moreover, the argument concludes from the accidental or contingent to a cause. Such an inference has no meaning outside of the phenomenal world, but in the cosmological proof it is used to transcend experience, which is forbidden. Kant points out that the argument contains a nest of dialectical assumptions. It may be permissible to assume the existence of God as the cause of all possible effects, in order to assist reason in the search for the unity of causes, but to say such a Being necessarily exists is not the modest language of legitimate hypothesis, but the impudent assurance of apodictic certainty. The un-

conditional necessity, which we require as the last support of things, is the true abyss of human reason.

The physico-theological argument infers the existence of a Supreme Being from the nature and arrangement of the present world. It, too, fails. The manifoldness, order, and beauty of the world, it tells us, lead us to infer a cause of its origin and continuance. Such a cause must possess a higher degree of perfection than any possible experience of ours. What is to prevent us from conceiving all possible perfection as united in this Supreme Cause as in one single substance? The proof deserves respect; it is the oldest and clearest and most in conformity with human reason. It reveals purposes and ends in nature, where our observation would not itself have detected them. Nevertheless, we cannot approve of its claims to apodictic certainty. It is an argument by analogy, inferring from the similarity between natural products and works of human art (houses, ships, clocks) that a similar causality, namely understanding and will, lies at the bottom of nature. If we must name a cause, we cannot do better than to follow the analogy of such products of human design, which are the only ones of which we know completely both cause and effect. There would be no excuse if reason were to surrender a causality which it knows, and have recourse to obscure and indemonstrable principles of explanation which it does not know. The argument, however, could, at best, establish a world-architect, who would be much hampered by the quality of the material with which he has to work, but not a world-creator to whose Idea everything is subject. The physico-theological proof leads from experience to the cosmological proof, which is merely the disguised ontological proof. The ontological proof would be the only possible proof if such a proof were possible at all.

Outside of the field of experience, the principle of causality cannot be employed and has no meaning. Hence, unless we make the moral laws the basis or are guided by them, we can have no rational theology. For, all synthetic principles of the understanding are applicable *immanently* only, that is, in the phenomenal realm; to arrive at a knowledge of a Supreme Being, we must use them transcendentally, and for this our understanding is not prepared. Even if we should allow the causal

leap beyond the limits of experience, we could not reach a concept of a Supreme Being, because we never *experience* the greatest of all possible effects from which to conclude the Supreme Cause. Transcendental theology has an important negative use, however; it acts as a constant censor of our reason and removes all atheistic or deistic or anthropomorphic assertions.

Use of Metaphysics in Experience

Though the transcendental Ideas produce an irresistible illusion, they are as natural to reason as are the categories of the understanding. The latter, however, convey truth, *i.e.,* agreement of our concepts with their objects. Every faculty has its use, provided we can discover its right direction. The transcendental Ideas have their immanent use; but when they are mistaken for concepts of real things, they are transcendent in their application and deceptive. They have no *constitutive* use, that is, they are not concepts of objects; they have a *regulative* use, that is, they direct the understanding to a certain aim: they unify the manifoldness of *concepts,* just as the categories bring unity into the manifoldness of *objects.* Through the Ideas reason aims to systematize our knowledge, to connect it by means of one principle. This systematic unity is merely logical; the reason must keep on unifying; systematic unity is a method, it is subjectively and logically necessary, as a method, not *objectively* so. Many of the so-called scientific principles are Ideas, having hypothetical value, but not absolute truth. We can know *a priori* only the forms of reality, *e.g.,* that it is spatial and temporal, that things are causally related. But that there are fundamental causes, or powers, or substances, or even one such power, or cause, or substance, is a mere hypothesis. We cannot assert that such unity exists, but we must always look for it, in the interest of reason, in order to introduce order into our knowledge. Philosophers assume that there is such unity in nature when they say: "Principles should not be multiplied beyond necessity."

Some students of nature (preëminently speculative) are more intent on the *unity* of nature, on discovering likeness in diversity; others (preëminently empirical) are constantly striving to *divide* nature into species. The latter tendency is based on a logical principle which aims at systematic completeness. Every genus has different species; these, different sub-species, and

so on. Reason demands that no species be regarded as the lowest in itself. We have therefore the law of homogeneity and the law of specification, which are not derived from experience. Moreover, there are always intervening species possible between the species and sub-species. This is the law of the continuity of species: there is no transition from one to another *per saltum*, by leaps, but only by smaller degrees of difference. This law presupposes a transcendental law of nature (the law of continuity in nature), without which the understanding would only be misled, by following, it may be, a path contrary to nature. But this continuity of forms is, likewise, a mere Idea, no object corresponding to it can be pointed out in experience; the species in nature are actually divided. The law just guides the understanding in general, it has no reference to any particular objects. The two principles (unity and difference) can easily be combined, but so long as we mistake them for objective knowledge, they cause discord and even obstacles in the way of truth.

The Ideas have objective reality in a certain sense; not in the sense that we can find anywhere in experience an object corresponding to them: we cannot see anywhere a highest genus or a lowest species or the infinite number of intervening transition-species. They have objective reality in the sense that the understanding is their object, and that they give rules to this understanding. They outline the procedure or *method* for understanding to follow; they say: keep on seeking for a highest genus, for a lowest species, and so on. In this way they have an indirect effect on the objects of experience; they bring consistency into the functions of the understanding.

The only purpose of the Idea of a Supreme Being is to preserve the greatest systematic unity in the empirical use of our reason. The Idea of a ground or cause of the objects of our experience helps us to organize our knowledge. The psychological, cosmological, and theological Ideas are not referred directly to an *object* corresponding to them and its qualities, yet by presupposing such an object in Idea we are led to organize and extend our knowledge without ever contradicting it. Hence, it is a necessary *maxim* of reason to proceed according to such Ideas. In psychology, we must connect all inner phenomena *as if* our soul were a simple substance existing

permanently, and with personal identity (in this life, at least), in order that we may unify our facts. In cosmology, we must pursue the conditions of all natural phenomena (inner and outer) in an investigation that can never be complete, *as if* the series were infinite and had no first and highest member. In theology, we must look at everything that may belong in the connection of possible experience, *as if* that experience formed an absolute unity (but yet a unity thoroughly dependent and always conditioned within the world of sense). At the same time, also, we must look at it *as if* the totality of all phenomena (the sense-world) had one supreme and all-sufficient ground outside of it, namely an independent, original, and creative reason. All this does not mean: derive the inner phenomena of the soul from a simple thinking substance, but: derive these phenomena from each other according to the Idea of a simple being: that is, treat these phenomena in the usual scientific way, but keep before your mind the Idea that there is unity in this body of phenomena. It does not mean: derive from the highest intelligence the world-order and the systematic unity of the same, but: use the Idea of a most wise Cause as a guide how best to employ the reason in connecting causes and effects in the world, for reason's own satisfaction.

These Ideas or principles, then, are not mere fictions of the brain, but are highly useful, indeed necessary. We cannot think of systematic unity without giving the Idea some object, without objectifying it or *realizing* it, as it were. But no such object is ever *experienced,* it is assumed problematically,—as a problem. We assume a God so that we may have some ground on which to fix the systematic unity, some focal point from which and to which to proceed. The same thoughts apply to the Idea of soul-substance. It is not to be regarded as a thing-in-itself, an entity of which we can know anything, but as something on which we can rest our thought, a kind of focal point to which to refer all states of consciousness. If we take the Idea for what it is, for a mere Idea, we shall not confuse empirical laws of corporeal phenomena (which are totally different) with the explanations of what belongs to the inner sense, we shall admit no windy hypotheses of generation, extinction, and palingenesis of souls.

Human knowledge begins with percepts, proceeds to concepts, and ends with Ideas. It has *a priori* sources of knowledge with respect to all three elements. A complete criticism shows that reason, in its speculative use, can never go beyond the field of possible experience with respect to these elements.

Among the Ideas which reason applies in the contemplation of nature is the Idea of purpose, or the teleological Idea. This Idea Kant subjects to careful criticism in a separate work called *The Critique of Judgment,* in which also the nature of æsthetic judgment is discussed. The understanding conceives every existent whole of nature solely as the effect of the concurrent moving forces of its parts. In the case of organic bodies, however, the parts *seem* to depend on the whole, to be determined by the form or plan or Idea of the whole. Every part is both a means and an end and, in coöperating to make the whole possible, is determined by the Idea of the whole. Here, again, we have an antinomy and a dialectic:—the thesis stating: the creation of all material things is possible according to mechanical laws; the antithesis: the creation of some is not possible according to mechanical laws. The contradiction is removed when we take these propositions not as constitutive principles but as regulative principles. In the latter sense, the first invites us to seek for mechanical causes in material nature wherever it is possible; the second to search for final causes or purposes in certain cases (and even in nature as a whole) where the mechanical explanation does not seem to suffice. It does not follow from these principles, if we interpret them thus, that certain natural products cannot be explained mechanically nor that they can be explained by mechanical causality alone. Human reason will never be able to discover a natural purpose by searching for mechanical causes. It is not impossible that the physical-mechanical series and the teleological series of the same things may be united in one principle in the inner ground of nature which is unknown to us. We are compelled by the constitution of our reason, by our *reflective* judgment, as Kant here calls it, to view the organic world as purposive; but sense-experience never discovers such a purpose nor do we possess any intellectual intuition that might enable us to see it. We cannot

Use of Teleology in Nature

assume a blind unconscious purpose, for this would be hylozoism, which means the death of all natural philosophy; besides, we never find such blind purposes in our experience; the only kind of purposes we know are the conscious purposes of man. Kant repudiates vitalism; we must either abandon the effort to determine the cause of the unity of the organism or conceive it as an intelligent Being. The value of the teleological Idea consists in guiding the investigator in the study of nature; it helps him to discover the purpose which an organ and the smallest part of the body serve and by means of what efficient causes the result or purpose is realized. The teleological interpretation of nature is, therefore, an inevitable attitude of reason, aroused by the contemplation of certain phenomenal forms, but it has no legitimate use in experience except as a working-hypothesis or guiding principle.

Practical Use of Reason and Moral Theology

The final purpose of nature in arranging our reason is a moral one. The whole interest of reason, whether speculative or practical, is centered on three questions: What can I know? What ought I to do? What may I hope for? We can never have knowledge of the existence of God, freedom, and immortality in the scientific sense of that term. The purely speculative interest in these problems, however, is very small. Even if all of them were proved, they would not help us to make any discoveries in the field of natural science. They are of no use to us in so far as knowledge is concerned; their real value is practical, ethical. Now, our reason commands moral laws. The moral laws are necessary. If they are, we can reason theoretically from them as premises in a necessary way. The law tells me to act so that I will be deserving of happiness; this is a necessary practical law. Since reason commands this, it must follow, as a necessity of theoretical reason, that I may hope for happiness. Morality and happiness are inseparably connected, but they are connected in Idea only. Now, if God is the author of the natural order, it is possible to hope that this natural order is also a moral order, or rather that in such a natural order happiness will accompany morality. Our reason compels us to regard ourselves as belonging to a moral world-order, in which happiness and morality are connected. But the

world of sense shows nothing but phenomena, in which such a connection is not revealed. Therefore, we shall have to assume a future world in which the connection does exist. God, therefore, and a future life are two presuppositions which, according to the principles of pure reason, cannot be separated from the obligation (moral law) which reason imposes upon us.

Moral theology inevitably leads to the concept of a single all-perfect and rational original Being. This Being must be omnipotent, so that all nature and its relation to morality can be subject to him; omniscient, so that he may know the innermost disposition and its moral worth; omnipresent, that he may be immediate to all the needs which the highest good of the world requires; eternal, that this harmony of nature and freedom may never be absent. If the world is to harmonize with what our practical reason, our moral use of reason, demands, it must be regarded as derived from an Idea, the Idea of the highest good. Our practical reason demands the union of virtue and happiness; this cannot be unless we look upon the world as having a moral purpose,—a moral Being behind it that realizes the purpose. In this way speculative reason and practical reason become united. And in this way, the study of nature tends to assume the form of a teleological system, and to become physico-theology. In other words, we are led to teleology and God through the moral law.

Pure reason, therefore, in its practical employment, that is, as moral reason, connects a knowledge,—which mere speculation can only conjecture, but not guarantee,—with our highest practical interest. It thereby makes it not a demonstrated dogma, but an absolutely necessary presupposition for its essential purposes.

Ethics

Kant's moral philosophy, which he presents in his *Grundlegung zur Metaphysik der Sitten, Kritik der praktischen Vernunft,* and *Metaphysik der Sitten,* may be regarded as an attempt to judge the quarrel between intuitionism and empiricism, idealism and hedonism. His fundamental problem is to discover the meaning of goodness, right and wrong, or duty, and the implications of our moral knowledge; how shall we define duty and what follows from man's moral nature?

Rousseau had taught him that nothing is absolutely good in this world or out of it except a good will. A will is good when it is determined by respect for the moral law, or the consciousness of duty. An act that is done from inclination, say from self-love or even sympathy, is not moral; to be that, it must be done in the face of such impulses, from sheer respect for law. Moreover, the rightness or wrongness of an act does not depend on its effects or consequences; it is immaterial whether happiness or perfection results, so long as the motive of the agent is good. Pure respect for the law is the sublime test. The sentimental morality of "the volunteers of duty" was as distasteful to Kant as the utility-ethics. The moral law is a categorical imperative; it commands categorically, unconditionally; it does not say: Do this if you would be happy or successful or perfect, but: Do it because it is your duty to do it (duty for duty's sake). It does not concern itself with particular acts or even with general rules, but lays down a fundamental principle: Always act so that you can will the maxim or determining principle of your action to become universal law; act so that you can will that everybody shall follow the principle of your action. This law is a sure test of what is right and wrong. For example, you cannot will that everybody should make lying promises, for if everybody did, nobody would believe anybody, and lying promises would defeat themselves. A rational being cannot really will a contradiction, and it would be a contradiction to will a lying promise. Nor can such a being will to disregard the welfare of others, for if such conduct became universal, he himself might some day be treated inhumanly, and he could not will to be a member of such an inhuman society.

This law or categorical imperative is a universal and necessary law, *a priori,* inherent in reason itself. It is present in the commonest man; though he may not be clearly conscious of it, it governs his moral judgments; it is his standard or criterion of right and wrong. Implied in this law, or rather identical with it, is another law: Act so as to treat humanity, whether in thine own person or in that of any other, in every case as an end withal and never as a means. Every man conceives his own existence as an end in itself, as having worth, and must

therefore regard the existence of every rational creature in the same way. Here we have the humanitarian ideal which was preached by the Stoics and primitive Christianity, and which played such an important rôle in the ethical and political theories of the eighteenth century.

The rational will, therefore, imposes upon itself universal laws, laws that hold for all and are acceptable to all. If everybody obeyed the law of reason, a society of rational beings would result, a kingdom of ends, as Kant calls it, a society organized by rational purposes. The categorical imperative, in other words, implicitly commands a perfect society; the ideal of a rational realm of spirits is necessarily implied in it. Therefore, every rational being ought to act as if he were by his maxims, his universal principles, a legislating member of a universal kingdom of ends. He is both sovereign and subject: he lays down the law and acknowledges the law. By virtue of his moral nature, he is a member of a spiritual kingdom; in recognizing the authority of the law over him, he recognizes the ideal world as the highest good.

A man who is governed by the moral law and not by his impulses, his selfish desires, his appetites, is free. The brute is the play-ball of its wants and instincts; through the knowledge of the moral law within him, man can resist his sensuous appetites, all of which aim at selfish pleasure. And because he can suppress his sense-nature he is free: he ought, therefore he can. The moral imperative is the expression of man's real self, of the very principle of his being. It is his innermost self that expresses itself in the moral law; the moral law is *his* command, the command of every rational being. He imposes the law upon himself: this is his *autonomy*.

The fact of the moral imperative indicates the freedom of the will. If it were not for our moral nature, or practical reason, a proof of free will would be out of the question. Our ordinary scientific knowledge deals with the appearances of things, with the spatial-temporal order, and in this everything is arranged according to necessary laws: the occurrences in the phenomenal world are absolutely determined, as we have seen. If this temporal, spatial, and causal order were the real world, freedom would be impossible. But Kant teaches that the world

as it appears to our senses is not the real world. Hence freedom is *possible*. But whether it is actual or not, we should never know if it were not for the moral law which points us to a timeless, spaceless universe, to the intelligible world of free beings. In other words, the moral consciousness of man, his knowledge of right and wrong, gives him an insight into a realm that is different from the world of matter presented to the senses.

The moral consciousness implies the freedom of the will. It also implies the existence of God and the immortality of the soul, which notions the *Critique of Pure Reason* had shattered as scientifically demonstrable dogmas, but had left as possibilities. The moral proof for the existence of God runs as follows. The categorical imperative commands an absolutely good will, a virtuous will, a holy will. Reason tells us that such a will is deserving of happiness: a good man ought to be happy; hence, the highest good must consist in virtue *and* happiness, for virtue without happiness would not be a complete good. But virtue and happiness do not go together in this world, the virtuous man does not necessarily achieve happiness. Reason tells us there ought to be a Being who apportions happiness according to desert. In order to do this, such a Being must have absolute intelligence, or be omniscient: he must see through us; he must have our moral ideals, that is, be all-good; and he must have absolute power to make the connection between virtue and happiness, or be omnipotent. Such an all-wise, all-good, and all-powerful Being is God. The proof for immortality rests on the same premise: The moral law commands holiness or an absolutely good will. Since the moral law is a deliverance of reason, what it enjoins must be realizable. But we cannot reach holiness at any moment of existence; hence an endless time, an eternal progress towards this perfection is necessary. In other words, the soul must be immortal.

In the *Critique of Pure Reason* Kant rejects all the old arguments for the freedom of the will, the existence of God, and the immortality of the soul; the result of the *Critique of Pure Reason* is negative in this respect. In the *Critique of Practical Reason* he bases all these notions on the moral law. Man is free, man is immortal, and there is a God: all these truths are necessary implications of the rational moral law within us. The

moral law guarantees freedom, immortality, and God; religion is based on morality.

This teaching is closely connected with the Christian conception; so Kant himself tells us. (1) Morality demands holiness, perfection, an absolutely good will. (2) Man, however, cannot completely realize this ideal. Only God is perfect and holy; man has strong desires, hence a propensity to sin. All he can do is to respect the law, to attain to a dutiful disposition. (3) The highest good can be realized only in the life to come. (4) A character that is perfectly in accord with the moral law, a perfectly moral man, has infinite worth and deserves all possible happiness. (5) But the moral law does not promise happiness; we must do the right because it is the right, whether we are happy or not. Obedience to morality does not guarantee happiness. (6) Our reason, however, tells us that a moral man is worthy of happiness. Hence, it is reasonable to suppose that there is a Being who will apportion happiness to the good according to their deserts. A world in which such apportionment is made is the kingdom of God. (7) But happiness can never be the motive to moral conduct. We must do right, not for the sake of eternal happiness, but for the right's sake. It is such doctrines as these that have won for Kant the title of the philosopher of Protestantism.

57. Successors of Kant

The new philosophy suggested a number of problems. The first, and perhaps not the least difficult, task consisted in understanding the nature of "the Copernican revolution." The literature of the age shows how unsuccessful were many of the initial efforts to grasp its meaning. Hamann designated Kant as a Prussian Hume, Garve identified his teaching with Berkeleyan idealism; some perceived in it a subtle artifice for destroying the historical foundations of religion and for proving naturalism, others suspected it as a new support for the declining faith-philosophy. In order to assist in a clearer understanding of the subject, Kant wrote his *Prolegomena* (1783), Johannes Schultz published his *Erläuterungen* (1784), Reinhold his *Letters on the Kantian Philoso-*

The Problems

phy (1786-1787), and Hufeland and Schütz established *Die Jenaer Allgemeine Litteraturzeitung* (1785) as the organ of the critical movement. Jena became the home of the new school, and through the efforts of Schiller, Reinhold, Fichte, Schelling, and Hegel, who taught there, philosophy became one of the most honored subjects of study in Germany.

Among the other tasks that confronted the successors of Kant were the development of his epistemology, the unification of its principles, the solution of the problems following from his dualism between the intelligible and phenomenal worlds, freedom and mechanism, form and matter, knowledge and faith, practical reason and theoretical reason; and the removal of the inconsistencies introduced by the notion of the thing-in-itself. Another work to be undertaken was the construction of a universal system on the critical foundation laid by Kant; this became the chief occupation of the most famous successors of the great reformer: Fichte, Schelling, and Hegel.

Idealism and the Thing-in-Itself

Kant had examined the judgments of mathematics, natural science, and metaphysics, the moral, æsthetic, and teleological judgments, and had pointed out the presuppositions, preconditions, or principles on which they all rest. The question suggested itself, indeed was frequently asked by Kant himself, whether there was not a common root in which these principles had their origin and from which they might, perhaps, be derived. The thought of an ideal system of judgments, or of an interrelated system of knowledge held together by a fundamental and absolutely certain principle, took possession of some of the thinkers of the age and led in time to the attempt to construct an all-embracing system of idealistic metaphysics. But before this stage was reached, a great deal of work had to be done in the way of clearing away the difficulties presented by the Kantian *Critique of Pure Reason.*

K. L. Reinhold (1758-1823) in his *Versuch einer neuen Theorie des menschlichen Vorstellungsvermögens,* 1789, seeks to derive the faculties of sensibility and understanding as well as the categories from a single principle, the faculty of representation (*Vorstellung*), which is both receptive and active, or spontaneous: it receives matter and produces form. The object,

as it exists independently of representation, is the thing-in-itself, which is unknowable. G. E. Schulze, in his *Ænesidemus,** 1792, attacks the new critical philosophy as presented by Kant and Reinhold; instead of doing away with skepticism, he thinks, it restores it, leaving philosophy exactly where Hume had left it. It denies the possibility of knowledge of the thing-in-itself, and yet assumes its existence and applies categories to it, after having declared that these are valid only in the world of experience. The only way to overcome the skepticism and the contradictions implied in the notion of the thing-in-itself, according to S. Maimon (*Versuch über die Transcendentalphilosophie,* 1790), is to abolish the thing-in-itself as inconceivable and impossible. The cause and origin of the given, or *a posteriori* element in consciousness, is unknown to us, an irrational quantity, a surd, a problem that can never be entirely solved. Hence, we can have no complete knowledge of experience; we do not produce the objects of our experience, but we do produce the objects of our thought, which, therefore, are the only objects of our knowledge. S. Beck, influenced by the criticisms leveled against the *Critique,* interprets it in the idealistic sense: either the thing-in-itself must be rejected or the *Critique* contradicts itself (*Einzig möglicher Standpunkt aus welchem die kritische Philosophie beurteilt werden muss,* 1796). Kant could not have been the author of such a contradictory philosophy. The only possible standpoint is the view that what is given in consciousness is the product of consciousness. Without idealism there can be no *Critique.*

Critics of the New Philosophy

The poet J. G. Herder (1744-1803; *Metakritik,* 1799, *Ideen zur Philosophie der Geschichte der Menschheit,* 1784-1791) opposes the Kantian dualism of mental faculties and emphasizes the unity of soul-life; thought and will, understanding and sensation spring from a common ground. All of these factors coöperate in knowledge. He holds that rationalism with its conceptual method (the *Aufklärung*) cannot do justice to "living reality," and interprets nature and mind organically and historically. God reveals himself in nature and in man, particularly in the religion, art, and life of peoples (pantheism). The history of mankind is a process of evolution towards the ideal of humanity,

* Reprint of this book, edited by Liebert, 1911.

that is, the harmonious development of all human capacities in relation to the environment. Our rational capacity should be educated and fashioned into reason, our more refined senses into art, our impulses into genuine freedom and beauty, our motives into love of humanity.

F. H. Jacobi (1743-1819) declares that the *Critique* logically ends in subjective idealism, and, therefore, rejects its conclusions. Such a "system of absolute subjectivity," or nihilism, as he calls it, seems to him incapable of grasping the ultimate realities,—God and freedom,—upon which his heart is set. For the critical philosophy, objects are phenomena, ideas, dreams, "specters through and through": it can never be freed from the web of ideas into which it spins itself and find the true essence of things. Dogmatic rationalism, on the other hand, of which the mathematical method of Spinoza furnishes the most consistent example, Jacobi thinks, is equally unable to reach truth. According to it, everything is determined, and what has no ground is inexplicable, irrational, and non-existent: it culminates in atheism and fatalism. It operates with universal abstractions and must of necessity miss the living moving spontaneity of freedom and God. Rationalism exaggerates the claims of the universal over against the individual, the claims of deductive inference against immediate certainty, the claims of rationality against faith, and narrows the notion of experience to include only sense-experience. Jacobi escapes the alleged skepticism of idealism and the fatalism and atheism of rationalism by basing himself on feeling, belief, or faith, in which he finds an instinctive form of truth. We are immediately certain of the existence of things-in-themselves; this faith is made possible only by their direct *revelation;* it springs from our direct perception of the objects. We come face to face with the real, and not merely with ideas, as idealism holds; ideas are mere copies of originals which we immediately perceive. No existence of any kind can ever be demonstrated by reason with its abstract principles. Just as we immediately experience external objects, we experience our own being, the self, the beautiful, the true, and the good, free causality, and God. Kant and Jacobi both oppose naturalism with its atheism and fatalism, and strive to save God, freedom, and immortality. With this end in view,

both discredit the discursive understanding as a source of ultimate truth; both are in this sense anti-intellectualists: we can have no "knowledge" of things-in-themselves. Yet, both seek to give naturalism its due, Kant by turning over to it the entire *phenomenal* world, Jacobi by setting up a world of *real* objects which, however, is not completely subject to determinism. But Kant remains a rationalist in his effort to derive God, freedom, and immortality as implications of a rational moral law, while Jacobi finds their reality directly guaranteed by certain inner experiences, which carry with them the feeling of immediate certainty or faith. Kant's faith is a *rational* faith grounded on *practical* or moral certainty, that is, on man's knowledge of right and wrong. Jacobi's faith rests on direct experience of the supersensible: the ultimate realities are immediately revealed to us in our consciousness; here we come face to face with spirit, freedom, and divine Being: we believe in these things because we *experience* them directly. With Hamann and Herder, Jacobi broadens the notion of experience to include the vision of realities which the critical philosophy had placed beyond the reach of the human understanding.

Jacobi's *Briefe über die Lehren Spinozas,* 1785; *D. Hume über den Glauben,* 1787; *Introduction* to his works. Complete works in 6 vols., 1812-1825. Wilde, *Jacobi;* Crawford, *The Philosophy of Jacobi;* Harms, *Über die Lehre von F. H. Jacobi;* Lévy-Bruhl, *La philosophie de Jacobi;* Kuhlmann, *Die Erkenntnistheorie F. H. Jacobis;* Schmidt, *Jacobi.*

In his *Neue oder psychologische Kritik der Vernunft* (1807), Jacob Fries (1773-1843) seeks to combine the teachings of Kant and Jacobi. He bases the critical philosophy on psychology, substituting self-observation for the transcendental method. The principles of reason, which Kant seeks to prove *a priori,* are, according to Fries, immediately known in consciousness: we become directly aware of their certainty in ourselves. Only that which is sense-perceived can be known; we cannot know the supersensible, or things-in-themselves; they are objects of faith which satisfy the demands of the heart.

A neo-Friesian school, of which L. Nelson is a prominent member, is publishing monographs on Fries. (See Elsenhans, *Fries und Kant.*)

GERMAN IDEALISM

58. Johann Gottlieb Fichte

Post-Kantian Philosophy

As we have seen, the interest of the contemporaries and immediate successors of Kant was centered upon a number of problems: how to bring unity into the system of knowledge or to find a common basis for the principles of natural science, morals, æsthetics, and teleology; what to do with the thing-in-itself; how to justify the Ideas of God, freedom, and immortality. It now seemed desirable to comprehend in the unity of a system the various tendencies of the age: critical idealism, Spinozism, rationalism, the faith-philosophy, as well as the notion of development which occupied a prominent place in French thought and in the writings of Herder.

Kant had opposed the entire naturalistic world-view with its mechanism, fatalism, atheism, egoism, and hedonism, and had made room for a rational faith in human values by limiting the discursive understanding to the field of phenomena. In the world of sense-experience, the object of natural science, law reigns supreme: every event, human action included, is a link in the causal chain. There is no scientific knowledge possible outside of this domain: so far as the *Critique of Pure Reason* is concerned, the thing-in-itself is beyond the pale of the knowable. The perusal of the other *Critiques,* however, shows us that the notion of the thing-in-itself develops as we advance in our knowledge of the critical system. Conceived, at first, as a mere abstraction, a *Gedankending,* it becomes a necessary Idea of reason, a regulative principle expressing the rational demand for unity (soul, world, God). The Idea of freedom is found to be a possible or thinkable ground of all things; the moral law, however, demonstrates the reality of this Idea and vouchsafes the existence of God, a spiritual kingdom, and immortality. The thing-in-itself which began as an abstraction is interpreted in the sequel as freedom, practical reason, will, and made the ground of the theoretical reason. There is, then, a higher kind of truth than that offered by scientific intelligence; the moral

law within us is a sure guarantee of the existence of the supersensible world, which is closed against the mathematical-physical methods of the understanding. But Kant was cautious in dealing with the practical possibilities suggested by the categorical imperative; he hesitated to transcend the limits of experience and refused to lead his followers into the promised land. It could not be reached through the theoretical reason, and he saw no possibility of entering it through the gates of immediate experience: the closer we come to immediacy, according to him, the nearer we are to chaos and the farther from truth: percepts without concepts are blind. And we do not possess the power of intellectual intuition which would enable us to meet the thing-in-itself face to face. Nor was the sober-minded criticist ready to seek in sentimentalism or mysticism the approach to the heart of reality; indeed, he had a contempt for extravagances of this sort in philosophy, for such they seemed to him. And yet, in spite of all his rationalism, there is an element of faith in his method: faith in the moral imperative saves us from agnosticism, materialism, and determinism: we know because we believe in the moral law. If it were not for that, we should not only know nothing of freedom and the ideal order, but also be helpless to free ourselves from the mechanism of nature: it is moral truth that both sets us free and proves our freedom. It was this phase of the new philosophy that particularly appealed to the new generation; it offered an escape from the causal universe without, apparently, sacrificing the legitimate claims of knowledge. Spinozism had become popular in Germany during the latter part of the eighteenth century and was regarded by many thinkers, even by those who rejected it, as the most consistent dogmatic system, indeed as the last word of speculative metaphysics: Lessing, Herder, and Goethe had been attracted to it, and Fichte had heroically accepted its rigid determinism as inevitable, before his acquaintance with the critical philosophy. It was the Kantian solution of the controversy between the head and the heart and the idealistic world-view which it vouchsafed that became popular in German philosophy and formed the starting-point of what is called Post-Kantian idealism, the chief representatives of which are Fichte, Schelling, and Hegel.*

* Cf. Thilly, *Romanticism and Rationalism, Phil. Rev.*, March, 1913.

Kant had reached his standpoint by a laborious critical examination of scientific, moral, and metaphysical knowledge; his successors make the intelligible world, or freedom, to which the moral law points, the starting-point of their speculations: the ideal or supersensible world, the world of mind or spirit (*Geist*), is the real world. With this self-determining spiritual activity as the principle, they seek to solve all the problems of philosophy, to account for knowledge and experience, to explain nature and history and human institutions. The ideal principle, they tell us, brings unity into our knowledge, unifies the categories and theoretical and practical reason, enables us to overcome the dualism between mechanism and teleology, and removes the inconsistencies in the Kantian thing-in-itself. We can understand reality only when we interpret it in the light of self-determining reason; consequently, reason understands the world only when it understands itself. Hence the importance of the science of knowledge, or *Wissenschaftslehre,* as Fichte called it, in the systems of the Post-Kantians: the discovery of the correct method of knowledge will solve the problem of metaphysics; indeed, philosophy is *Wissenschaftslehre.* Hence, also, philosophy is the absolute science, which explains everything and alone can explain everything: mere empirical knowledge of facts is not real knowledge, and the empirical sciences of nature and history are not true sciences. If to know means to comprehend the active, living, synthetic, spiritual process of reality, a method that limits itself to phenomena in a spatial-temporal-causal series cannot be knowledge: on this point Fichte, Schelling, Schleiermacher, and Hegel are agreed. They agree also in their conception of reality as a process of evolution, in the organic and historical view of things, which Lessing, Herder, Winckelmann, and Goethe taught; but differ in their methods of reaching a knowledge of it, as we shall see.

Fichte's basal thought, the one which he regards as the keystone of the critical philosophy, is the notion of freedom, the idea that the will, or ego, is not a thing among things, a mere link in the causal chain, but free self-determining activity. Only such activity is truly real, all else is dead passive existence: it is the principle of life and mind, of knowledge and conduct, indeed, of our en-

Fichte's Principle

tire world of experience, the moving power in all progress and civilization. It is the ground on which knowledge rests, the unifying principle of the theoretical understanding, at which Kant had hinted and which Reinhold sought, and the common root of theoretical and practical reason. The study of knowledge will, therefore, prove to be the most important subject of philosophical inquiry, and to this Fichte constantly addressed himself during his strenuous career. The *Wissenschaftslehre* is the key to all knowledge: in it he offers a comprehensive and detailed account of the conditions, principles, or presuppositions of both theoretical and practical reason.

Johann Gottlieb Fichte was born in Saxony, 1762, the son of a poor weaver. Through the generosity of a nobleman, who was impressed with the child's talent, he obtained the means to attend the schools at Meissen and Schulpforta. He studied theology at Jena, Leipzig, and Wittenberg (1780-1784), and gave private lessons, often interrupting his university work for long periods of time, in order to gain his livelihood as a tutor (1784-1793). In 1790, at the request of some students who desired him to instruct them in the new critical philosophy, he began the study of Kant, which revolutionized his thought and determined the direction of his life. In 1794 he was called to a professorship at Jena, then the intellectual center of Germany, and became the leader of the new idealism, the aim of which was the reform of life no less than the reform of science and philosophy. During the Jena period (1794-1799) Fichte wrote a number of works on the *Science of Knowledge, Natural Right,* and *Ethics.* The publication of an essay, *On the Ground of our Belief in a Divine World-Order* (1798), in which he seemed to identify God with the moral world-order, provoked the charge of atheism. He resigned his professorship and went to Berlin, where he developed his philosophy and presented it in popular form in lectures and in books. In 1807-1808 he delivered his celebrated *Addresses to the German Nation,* in which he appealed to the patriotism of his people while Napoleon's army was still occupying Berlin. He became professor of philosophy in the newly founded University of Berlin, in 1809, and served the institution ably and faithfully until his death in 1814.

Versuch einer Kritik aller Offenbarung, 1792; *Grundlage der gesammten Wissenschaftslehre,* 1794; *Grundlage des Naturrechts,* 1796; *Das System der Sittenlehre,* 1798; *Die Bestimmung des Menschen,* 1800; *Die Anweisung zum seligen Leben,* 1801; *Reden an die deutsche Nation,* 1808.

Posthumous works ed. by J. H. Fichte, 3 vols., 1834; complete works ed. by J. H. Fichte, 8 vols., 1845-1846; selected works, by Medicus; *Letters,* by Weinhold, 1862, J. H. Fichte, 1830. Translations: *Fichte's Popular Works* (*Nature of Scholar, Vocation of Man, Religion, Characteristics of Present Age*), by Smith; *Science of Knowledge* (*Con-*

ception of the Science of Knowledge, part of *Grundlage,* the *Sketch* of 1795, and minor essays), *Science of Rights,* and *System of Ethics,* by Kroeger; other works in *Journal of Speculative Philosophy,* by Kroeger; *Vocation of Man* and *Addresses to German Nation* in *German Classics,* vol. V.

Monographs by Adamson, Everett, Medicus, Loewe, X. Léon, Fischer; Thompson, *Unity of Fichte's Doctrine of Knowledge;* Talbot, *Fundamental Principle of Fichte's Philosophy;* Raich, *Fichte: seine Ethik,* etc.; Zimmer, *Fichtes Religionsphilosophie;* Lask, *Fichtes Idealismus und die Geschichte;* Kabitz, *Entwicklungsgeschichte der fichteschen Wissenschaftslehre.* See also end of bibliography, p. 396, and Fuchs, *Das Werden dreier Denker: Fichte, Schelling, Schleiermacher;* Thilly, *Fichte, Schelling, Schleiermacher,* vol. V of *German Classics,* and *Romanticism and Rationalism, Phil. Rev.,* March, 1913.

Kant, according to Fichte, had abstracted the categories from experience, but had not shown that they were necessary laws of intelligence: that is, he had not demonstrated his principles. This can only be done, Fichte tells us, by deriving them from a common root, that is, only by means of a strictly scientific procedure. Every science, in order to be science, must possess a coherent body of propositions, held together by a first principle; it should be an interrelated system of propositions, an organic whole in which each proposition occupies a certain place and bears a certain relation to the whole. Thus, the notion of space is the central idea in geometry, that of causation in natural science. The different sciences call for an all-embracing Science, a science of sciences, a *Wissenschaftslehre,* which shall establish or prove the basal principle on which every one of them rests. And this universal science or philosophy, the source of the certainty of all the others, must itself proceed from a self-evident or necessary proposition, from an absolute first principle that shall give its own judgments their scientific character, while, at the same time, validating those of all the other fields of research.

Aim and Method of the Science of Knowledge

This central science, however, is not the lawgiver, but the historiographer of knowledge: it becomes conscious of the system of the necessary acts of the mind, observes or watches it in its necessary creation. And yet it is not a mere register of what happens, though Fichte sometimes declares it to be such; it seeks to understand the necessity of these acts, to discover

the grounds or logical presuppositions of the various forms of knowing. "If but a single link in the long chain which idealism has to forge does not finally connect itself with the one next to it, our science does not claim to have proved anything at all." The assumption is that the mind itself is a rational system, that it acts as organic reason, that the different functions of intelligence are not disconnected and unmeaning acts, but all means to a common end; that if it were not for them, the purpose of reason,—namely, the evolution of self-consciousness,—could not be realized. The philosopher should, therefore, understand the purpose or meaning of all consciousness before he can undertake the task of deduction. Just as in a clock, if we know the purpose of the whole, its structure, size, and so on, we can tell what the parts must be, so in the case of the system of consciousness, we can understand the parts if we understand the whole, or purpose: that is, clear and complete, or developed, self-consciousness. The method of the *Wissenschaftslehre* consists in showing that the various acts of intelligence are means to the evolution of self-consciousness, that the mind could not become free and self-conscious if it were not for these particular acts of intelligence. In his earlier and more technical works Fichte develops the system of knowledge from the fundamental principle; in the more popular presentations he rises from the observation of knowledge to the principle; but his object is always the same: the illumination of the organic unity of knowledge. He sometimes calls his method a *genetic* method; it does not, however, aim to describe the *psychological* genesis of the principles of knowledge, but to show how they arise from their necessary presuppositions, or how reason itself evolves them.

In order to study the genesis of rational thinking, the philosopher must set his thought in motion by an act of will: philosophy, therefore, begins, not with a *fact,* but with an *act.* Knowledge is not a mere passive mirroring of the world or mere opinion, but a self-determining living process,—not a possession, but an achievement. Genuine knowledge is possible only by an act of freedom. I understand only what I can create freely in thought; what I cannot create, I do not understand. Consciousness can be explained by nothing outside of itself; it cannot be produced by anything external to it, it is a spontaneous

act or creation which becomes aware of itself in the act of creation. Knowledge, in other words, necessarily presupposes, as its ground, pure activity, self-determining activity, or rather it is such activity. Knowledge, intelligence, thought, is free. There could be no world of sense, no experience, no thinking, without such activity; this, therefore, is the fundamental principle which we have been seeking. The pure ego, the principle of egoity, or self-active reason, is the starting-point of the *Wissenschaftslehre,* the self-evident presupposition of all knowledge; it is also the end or goal of our science, for when the *Wissenschaftslehre* has reached complete self-consciousness, consciousness has grasped the meaning of all knowledge.

As we have seen, an act of will is needed to set the mind (the ego) in motion, but, once at work, it will act in certain necessary ways. In this sense, necessity is a product of freedom. I am not compelled to think, but if I think, I must think according to laws,—in sensuous terms, let us say, according to the forms of space and time, according to the principle of sufficient reason, and so on. But no consciousness would be possible without an active ego. Take, for example, the judgment $A = A$; simple as it is, it would be impossible if it were not for a synthetic mind. If the ego did not spring into existence and act, or posit itself, as Fichte puts it, there could be no subject, no object, no world of experience. And since there can be no world of experience, no phenomenal world, without the ego as its condition, it is impossible to conceive the ego as a link in the chain of objects; that would be putting the cart before the horse.

The question arises, How do we reach the ego-principle? We can *infer* it as the ground of experience and the forms of thought, as the unity of theoretical and practical reason. But Schulze had warned against such reasoning as contrary to the spirit of the *Critique,* and Fichte himself sometimes sees no more speculative warrant for assuming a spiritual ground than a material ground. He offers several other lines of argument in support of his idealism. One of them connects itself with the results of Kant's ethical philosophy, and finds its way to the principle by means of the moral law. Fichte shares Kant's view of the insufficiency of the in-

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tellect: we cannot grasp the living reality by the discursive understanding and its spatial, temporal, causal ways; only when we have seen through the nature of ordinary knowing, its superficiality and relativity, can we grasp the living reality behind the surface: freedom, the moral world-order, and God. If we were limited to scientific intelligence, we could never rise beyond the notion of an inexorable causal order, and would ourselves be unable to escape the machinery of nature. But there is a way out. In an act of *intellectual intuition,* which is itself an act of free will, we become conscious of the law of duty, or the universal purpose, which commands us to be free persons, to free ourselves from the determinism of nature, to refuse to be mere links in a causal chain. Acceptance of the law of duty and of the freedom which it implies will give our life worth and meaning; it will enable us to understand the world as the instrument of a universal purpose (the realization of freedom), and to transform ourselves from blind tools of this purpose into its willing helpers. Now it becomes clear that our ordinary sense-perceiving knowledge is a practical instrument for achieving freedom; it presents us with the resistance needed for the exercise of will: we cannot become free without putting forth effort, hence we need a world to struggle against and to overcome. The world would have no meaning, therefore, if the command of duty to achieve freedom were not realizable; it becomes perfectly intelligible to us in the light of the deliverances of the moral consciousness.

These thoughts won for Fichte's philosophy the name of ethical idealism: it is a world-view based on moral faith. We cannot prove to theoretical reason the primacy of a free self-determining being,—for theoretical reason never ceases to search after grounds,—but we accept such a principle as ultimate, because it alone can satisfy the demands of our moral nature and give our life worth and meaning. It is from this standpoint that "the choice of one's philosophy depends on what kind of man one is," as Fichte says. The man without the ethical ideal, the man who cannot free himself from the machinery of nature, cannot conceive himself otherwise than as a thing or product, or take an interest in the free self: he cannot know and prize what he has not experienced,—the freedom to be a person,—

and he cannot experience it because he has never achieved it. The man who has freed himself from the slavery of the senses, who is a self-determining agent, regards himself as a power superior to everything sensuous, and cannot will to conceive himself as a thing.

There is another line of thought in Fichte, according to which the ego is immediately conscious of its free activity in itself. Idealism has this advantage over dogmatism or materialism: the object of the former, the ego, appears in consciousness, not as an object of experience, not as a phenomenon or link in the causal series, but as an ego-in-itself, as something real, as something above all experience. There exists an immediate self-consciousness of free mental action. But such consciousness does not force itself upon us, we must produce it in ourselves by an act of freedom. If we cannot perform the act, we will not understand the idealistic philosophy, we will not get the glimpse into the real world of mind. The dogmatist denies the postulate of the freedom and independence of the ego because he cannot discover it in his world; if he is consistent, he must be a fatalist and a materialist. We cannot prove conceptually that there is such an act of intellectual intuition nor what it is. Every one must find it directly in himself, or he will never know of it. As well might we attempt to explain to a man born blind what colors are as try to demonstrate what this intellectual intuition is. But it can be pointed out to every one that it occurs in every phase of his consciousness. Every person who ascribes activity to himself, tacitly appeals to such an intuition. Here Fichte holds that wherever there is spiritual activity, there is consciousness of it, even though it escapes the attention of the dogmatist.

Fichte also points out that the truth of idealism can be verified by experience. If the presupposition of idealism is correct and if the correct deductions have been made, the final result must be a system of necessary ideas, or the sum-total of experience. If the results of a philosophy do not agree with experience, the philosophy is certainly false, for it has not kept its promise to deduce the whole of experience and to explain it by the necessary action of intelligence. But idealism does not keep experience in view as a goal at which to arrive; it pays no

attention whatever to experience. In its procedure, it evolves its propositions from the basal idea, regardless of what the results may be. That is what Fichte says, but, as a matter of fact, he does pay attention to experience; he asks us to observe the intelligence in its operations, to watch the mind at work. What he means to imply is that mere observation of such acts would not be philosophy, that this demands an understanding of these acts, an understanding of their ground and purpose, and that such an understanding can only be reached by logical thought.

External World

Fichte bases all reality on the ego; since ego is everything, there can be nothing outside, no thing-in-itself in the sense of an independent extra-mental object. The problem of idealism is, therefore, to explain how we happen to ascribe objective reality to what seems to be merely subjective, or, how we come to assume existence or being as opposed to life, action, mind. Fichte tells us that it belongs to the very nature of the self-active principle to limit itself: in springing into existence it at the same time limits itself, and it must limit itself if it is to be at all. I experience my limitation in my feelings of red, sweet, cold; they show me that I am limited; they force themselves on me. Dogmatists attempt to explain such original feelings or sensations as the effects of something, of a thing-in-itself; but here all transcendental explanation comes to a stop, according to Fichte. The objective world is produced by the ego for itself, in the sense that the mind projects the purely subjective modifications of consciousness into space, or makes objects of them. If it were not for sensations and the necessary functions or acts of the ego (space, time, and causality), we should never produce the phenomenal world which we perceive. What arouses sensations, we do not know. This does not mean that our knowledge of the phenomenal world has no objective validity. It is not an illusion that things are presented to us, it is our sole truth. It becomes an illusion only when we say there are things-in-themselves independently of us, outside of us. It is a false philosophy that introduces this fictitious notion; common-sense knows nothing of it. Take this world as you find it, seek to understand it and to act on it. This is the standpoint of critical idealism: we cannot transcend consciousness by our theoretical reason. All that

we can know is that the ego posits itself as determined by the non-ego; that it does so cannot be *theoretically* explained. Fichte, however, solves the problem practically: we cannot explain to reason the origin of the limits; but their *significance* or ethical value is perfectly clear and certain: they mark our definite place in the moral order of things. What we perceive through them has reality, the only reality that concerns us or exists for us. Our world is "the sensualized material of our duty;" through these things we can and must realize our moral ideals. The world is a means of realizing our purposes, hence what difference does it make whether it is real or appearance? The ego as a self-active being needs a world of opposition, one in which it can struggle, one in which it can become conscious of itself and its freedom, one in which it can achieve freedom. It demands a world ordered according to laws, a strictly determined world, in order that the free self may realize its purposes by relying on these laws. The ego must know what to expect, otherwise rational purposive action is impossible.

There is much in this view that is suggestive of subjective idealism, and most of Fichte's contemporaries interpreted it as such. Fichte, however, means by the ego, on which he bases his philosophy, not the individual ego of common-sense, but the pure ego, pure activity, universal reason, intelligence as such. Absolute ego (egoity, or *Ichheit*) and individuality are quite different concepts for him. Reason as such is prior (logically) to the personal ego, it is the condition or logical ground of the individual ego. We cannot think of individual selves without ascribing to them all the same reason, the same universal processes of thought. The logical *prius,* however, does not remain a mere logical *prius* with Fichte; as we saw before, the absolute ego turns out to be more than an abstraction. It is, in reality, above all persons, over-individual; it is the universal active reason, the same in all persons, of which the individual can have a vision if he wills it so. The highest degree of self-consciousness is the self-consciousness of the philosopher, the intellectual intuition in which the ego returns unto itself and is conscious of its activity. Here it rises above space- and time-perception; it no longer beholds a phenomenal causal order, but withdraws within itself,

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looks at itself, and knows itself. That is what gives Fichte's philosophy such certainty in his eyes; it not only *infers* a principle or reaches it by logical abstraction, but experiences it, in a larger sense of the term experience than Kant would accept. In his earlier writings Fichte speaks of this principle as the universal reason that acts in us all, that phase of us, we should say, that thinks in universal terms, that knows universal truths and has universal purposes or ideals. He was interested in refuting naturalism, the mechanical and deterministic conception of reality; and so emphasized the idealistic character of all experience. He did not define his notion of the ego in detail. This, together with the fact that he called it *ego,* led to the misconception of his system as subjective idealism, against which he protested vigorously from the beginning. Later on, he worked the problem out and expressed himself more definitely, so that the principle which his extreme opponents had interpreted as the personal subjective ego finally became God.

But whether it be called universal reason, absolute ego, or God, the principle is conceived as a *universal life-process* that dominates all individual consciousnesses. There are other rational beings outside of us, who both act on the phenomenal world and represent it in the same way; which shows that the same power of life, the same universal principle, is active in all egos. Nature is not the creation of the particular ego, but the phenomenal expression or reflection, *in the subject,* of the universal spiritual principle. Universal life is the true reality of which the individual selves are the products or phenomena; it dominates them, like a law of nature. Fichte is, therefore, a realist in the sense of assuming a universal principle of reality and not merely individual consciousnesses; but he refuses to conceive this principle as a static substance, either material or spiritual: it is a living, flowing, self-determining spiritual process that expresses or manifests itself in individual selves, that is the law of their nature, the common ground of their sensational or phenomenal life as well as of the necessary laws of thought. It is this universal life and reason that lives and thinks and acts in us: in it we live and move and have our being. Fichte does not deny the existence of an extra-mental world, in the sense of a reality outside of the individual personal consciousness;

indeed, he tries to show that there could be no such consciousnesses, no individuals, if it were not for the universal life-process. But this world is not a world of *dead things,* arranged in a spatial-temporal-causal order; the latter is the revelation in human consciousness of the absolute principle, and could not exist if it were not for the universal ego. Fichte's subjective idealism is supplemented by an objective or metaphysical idealism; he himself called it real-idealism. We are the creatures or products or revelations of universal nature; in us the universal law of nature thinks and comes to consciousness; yes,—but for that very reason nature must be *Geist,* spirit, mind, and can be nothing else.

How the universal and unlimited life-principle comes to divide itself among the countless individual selves, Fichte tries to make clear by means of the analogy of light. As light is broken by an obstacle and reflected or turned back to its source, so the universal activity must be reflected, or turned back upon itself, by some obstacle. There could be no consciousness (light), no self-consciousness, no self-determining thought, no knowledge, unless the infinite activity met with some check: it can, therefore, become conscious of itself only in finite form, in the ego limited by opposition. And since universal life is infinite, it cannot exhaust itself in finite form, but must go on, infinitely, producing egos, and become conscious of itself in this process of separation or individuation. Consciousness, it seems, arises through the self-limitation of the universal ego, through an act that precedes the birth of consciousness, and of which we are not conscious. The absolute ego produces the selves unconsciously, and the selves are unconscious of their creation.

But why should there be life at all, and why should it express itself in countless forms of consciousness? We cannot conceive of the universal life process or pure activity as purposeless; it would be meaningless if it were not a means to an ethical end. The purpose of nature, or the non-ego, is the same: it, too, is a means of realizing the ego. It is the same absolute ego that expresses itself in us and in nature, in the individual self and in the not-self. The life of the world and the individuals in it are the visible expressions of the ultimate moral purpose; we can understand them only as such; they have no

reality except as means to the moral end. The individual selves can, however, by an act of will raise themselves from the state of mere appearance to the knowledge of the supersensible, and in this way adopt the universal moral purpose as their own.

There is, then, a difference between the absolute, independent ego and the conscious, dependent, individual ego. The absolute ego is present in the individual ego as a pure impulse to action and as a moral purpose, as the consciousness of duty, which commands the self to overcome the opposition of the world of sense, to realize the ideal of freedom after which the absolute ego strives. When we become aware of pure activity in ourselves, we know the essence of reality, and when we strive to realize our moral purpose, we are striving to realize the meaning of the universe, the purpose of the absolute ego. The purpose of which the individual ego becomes conscious in itself is the voice of the Absolute, the purpose of the same absolute ego that expresses itself in the world of things. We can accomplish what our nature urges, or impels us to do; the same universal will that prompts the act at the same time produces the changes in the external world.

The question arises: What freedom is left to the individual self in this scheme? The individual self is a manifestation of an absolute activity; it is determined, on its theoretical side, by necessary laws of sense-perception and thought, and, on its practical side, by the universal purpose. The universal purpose is bound to realize itself in the world whether the individual wills it or not, and the sense-world will follow its laws regardless of him. But the individual has the power of choice whether he shall think or not;—thinking, in the real sense of the term, is only possible by an act of will,—and he can decide, also, whether to make the universal purpose his own; that, too, will depend on his free choice. It lies in our power to decide whether we shall remain blind tools of the universal purpose or become conscious and willing instruments in the service of the good. When once we have decided freely to do our duty, to realize the universal purpose, we are no longer free; we have made ourselves instruments of the Absolute, and our moral life is determined.

Freedom, in this connection, means a free inexplicable choice,

the freedom of indifference, a sudden leap of the will. Fichte concludes from this view that men are either good or bad, according as they have either chosen the good or have remained mere cogs in the machinery of sense, and that the good alone win immortality. He also concludes that resistance and moral struggle are never overcome; the universal moral purpose is never realized; moral life is in constant progress towards the good which it never reaches: hence, world will give way to world.

Moral Philosophy

Fichte's entire system is tinged with ethical ideas: it begins with Kant's categorical imperative and ends with the universal moral purpose of God. We have seen how he deduces our world of experience from the moral law: the moral law commands freedom from the rule of sense. There can be no deliverance from sense unless there is something to be delivered from, a state of unfreedom, a natural ego limited by a world. The moral law implies freedom, freedom implies deliverance from obstacles, and this implies a sensible world. The moral law implies a continued life of struggle, hence immortality; and it implies a universal purpose or a God. It also presupposes that what the individual aims at in his dutiful conduct is actually achieved and realized, that is, a moral order, an order that ought to follow from the moral determination of his will, something that lies beyond the sphere of his own moral will, but which must be assumed in order to give it purpose and meaning. In other words, the moral law implies a religious faith: it would have no meaning without religious faith, without the belief in a moral world-order and in the moral world-orderer. It is faith, then, that gives certainty and conviction to what might be mere illusion, and this faith is a decision of the will: I will to believe. Conscience is the touchstone of every truth and every conviction.

The ethical purpose realizes itself in the world; nature and man are instruments in the service of the good. Man's vocation is, therefore, to do his duty, to work consciously and voluntarily for the realization of the highest good, to turn his gaze toward the universal moral end. His conscience commands him to free himself from the slavery of sense, to be a person, not a thing. He cannot, however, escape the determinism of nature without knowledge, and he cannot act on nature without knowledge, hence

he must seek knowledge for moral ends and not from mere curiosity. It is, therefore, his duty to know what he is doing, and not to act unless he does know what he is doing. He should act from conviction always and never under the compulsion of authority. The command to be free carries with it the command to exercise his reason, to understand the purpose established by conscience. Conscience commands duty for duty's sake; such a command implies a purpose to be realized; conscience tells me what my purpose ought to be. I do not act as I act because something is a purpose for me, but it becomes a purpose because I ought to act so. Hence conscience is infallible, it will always tell us, in every concrete situation, how to act; that is, to be sure, if we stop to think the matter out.

For Fichte, morality does not consist merely in the good will, —respect for the moral law is not enough;—the good will must express itself in acts, it should seek to overcome the resistance of nature, inner and outer: morality is a struggle. The battle with nature, however, does not consist in annihilation, but in adapting it to man's ethical purposes; it can and ought to be made an appropriate instrument for the purposes of reason: hence the ethical significance of natural goods, of property, the various callings, and our entire industrial life, all of which can be placed in the service of the universal moral purpose. And since the moral life is not an isolated individual existence but a community life, each individual should regard himself as a member of a working society and sacrifice his own earthly possessions for the common good, by which alone the ultimate purpose can be realized. Every man should freely choose his proper sphere of action in the world in accordance with the dictates of his conscience, but that he may choose properly education is needed. Indeed, it is necessary that the individual be educated in order that conscience may arise in him; without instruction the voice of duty would not speak, and its significance would not be understood.

Every individual has his particular place in society in which to labor for the whole. Similarly, every people has its peculiar place in civilization, its unique contribution to make in the battle of humanity for freedom. In his patriotic *Addresses to the German Nation,* Fichte held up before his people the ideal of

German unity; it is Germany's mission, he said, to regain her national existence, to assume the philosophical leadership in the business of civilization, to establish a State rooted in personal liberty, a veritable kingdom of justice, such as has never appeared on earth, which shall realize freedom based on the equality of all who wear the human form. And it is the vocation of the human race to incorporate itself in a single united body, a universal federation of states, in which the culture contributed by every age and people shall be distributed over the entire globe.

But the earthly goal cannot be our highest goal; we promote the earthly human end merely as a means to the universal purpose: the realization of a spiritual kingdom which alone gives worth and meaning to the phenomenal order. Man is a citizen of both worlds: he cannot work for the other world without at least *willing* to work for this. We work for the other world by making the will good; every act in accordance with the will affects God and through him other spirits. The voice of conscience is God's voice in me; through conscience the spiritual world reaches down to me, through the will I reach up to it and act on it. God is the mediator between the spiritual world and me. The only principle by which I recognize your work is the voice of conscience, which commands me to respect your work, and this voice is God's voice. And our belief in the truth of the sense-world is nothing but the faith that a life promoting freedom and morality will evolve, world without end, from our disinterested and faithful performance of duty in this world of sense.

The state of universal peace among men and of their absolute dominion over the mechanism of nature is not something to be possessed for its own sake; the ideal is that men should produce it themselves, and that it should be produced by all men, as one great free moral community. The basal law of the great moral kingdom of which our present life is a part is: nothing new or better for a particular individual except through his own moral will; nothing new or better for the community except through the social moral will.

"I do not understand my complete vocation; what I ought to be and what I shall be transcends all my thinking. I know

for certain at every moment of my life what I ought to do in it: I ought to develop my intelligence and acquire knowledge in order to extend the sphere of my duty. I ought to regard myself, body and soul, merely as a means to the end of duty. All I can care for is the promotion of reason and morality in the kingdom of rational beings, for progress for its own sake. I regard myself as an instrument of the rational purpose and respect and love myself only as such. All the events of the world I measure by this purpose alone. My entire personality is absorbed in the contemplation of the goal. I am in the world of the highest wisdom and goodness, which penetrates its plan and executes it without error, and in this conviction I rest and am blessed."

59. Friedrich Wilhelm Schelling

New Idealism and Romanticism

Fichte's philosophy takes account of the diverse currents in the thought of his times, and seeks to gather them together in a common stream. With the *Aufklärung,* he opposes authority and tradition, and seeks a rational explanation of the world. In exalting the free personality and the rights of man, as well as civilization and progress, and demanding the reform of science, philosophy, religion, education, and of human life in general, he simply expresses the spirit of the entire modern age. His patriotic appeal for German national unity and his ideal of a State based on equality and justice voice the yearnings of a people oppressed by absolutism and humiliated by the Napoleonic wars. In making mind or spirit (*Geist*) the central principle of reality and delivering man from the incubus of mechanism, he expresses the yearning for a universe that shall be intelligible to reason and in sympathy with human ideals. Consistent with the new idealism, as interpreted by him, and in agreement with the great leaders of German literature, Lessing, Herder, Goethe, he conceives existence as a dynamic process of evolution guided by a moral purpose. With both the classic and Romantic poets of his age and the faith-philosophers,—and, indeed, with Kant himself,—he agrees that the universal living whole cannot be grasped by the categories of science: with Goethe that the uni-

verse must be conceived organically, as a unity in diversity; with Jacobi, that it can be known only in the inner living experience of the free agent, in intuition: in the act of freedom, in the sense of duty, and in the love of truth, spirit speaks to spirit. The anti-rationalistic and mystical element in Fichte's system,—which accompanies his rigorous logic,—attracted the Romantic poets: the two Schlegels, Tieck, and Novalis. Many other phases of the new idealism found favor in their eyes: its seeming subjectivism, its historical point of view, and its conception of the uniqueness of German culture. But all these characteristic features they tended to exaggerate: reason gave way to feeling and sentimentalism; Fichte's intuition became the divining, sympathetic insight of the poetic genius; the rational and ethical ego was transformed into a romantic, mystical, impulsive, even freakish, individualistic self. Nature was interpreted in analogy with such an ego and conceived as the abode of occult personified forces, while history was appealed to in support of tradition and the past given authority over the present.

On the Romantic school of poetry and its relation to philosophy, see the histories of German literature; Haym, *Die romantische Schule;* Walzel, *Deutsche Romantik;* K. Fischer, *Schelling;* Noack, *Schelling und die Philosophie der Romantik;* T. Ziegler, *Die geistigen und socialen Strömungen des XIX. Jahrhunderts;* Windelband, *Die Philosophie im deutschen Geistesleben des XIX. Jahrhunderts.*

Schelling was influenced by all these tendencies, particularly by the new idealism and the poetic Romanticism. He was, likewise, interested in Spinozism and in the natural-scientific movement, which had made headway in Germany, under the impetus given it by the critical philosophy. As a youth, not yet out of the Theological Seminary at Tübingen, Schelling gained fame as the best interpreter of Fichte; and, a few years later, supplemented Fichte's philosophy with a philosophy of nature that not only pleased the Romanticists and the poet Goethe, but found friends among the natural scientists of his country.

Friedrich Wilhelm Joseph Schelling, born 1775, studied philosophy and theology at the Theological Seminary of the University of Tübingen from 1790 to 1795. After serving as private tutor to two young students at Leipzig for two years, during which he himself studied

mathematics, physics, and medicine at the University, he accepted a professorship of philosophy at Jena (1798). Here he became attached to the Romantic circle presided over by August and Caroline von Schlegel, and produced his most brilliant works. After holding various positions, at Würzburg (1803-1806), at Munich as Director of the Academy of Fine Arts (1806-1820), at Erlangen (1820-1827), and at Munich, again, as professor of philosophy in the newly-established University (1827-1841), he was called to Berlin to stem the tide of the popular Hegelian philosophy, but met with little success. He died in 1854.

During his earlier period, Schelling reproduced the Fichtean philosophy and continued it in the spirit of the master; among his writings being: *Ideen zu einer Philosophie der Natur,* 1797; *Von der Weltseele,* 1798; *System des transcendentalen Idealismus,* 1800. During the second period, which shows the influence of Bruno and Spinoza, he conceives both nature and mind as two aspects of a higher principle: this is his philosophy of identity, presented in *Bruno,* 1802, and *Methode des akademischen Studiums,* 1802. In his third period Schelling develops what he calls his positive philosophy, a philosophy of revelation and mythology, or theosophy, which resembles that of Jacob Boehme. The universe is conceived as a fall from God. The meaning of universal history is sought in the obscure beginnings of mythology and revelation, from which, Schelling thinks, we may gain hints of the original fall of man from God. The works of this period, with the exception of one on human freedom, were not published until after his death.

Complete works ed. by his son, 1856, ff., 14 vols.; selected works, by Weiss, 1908; translations in *Journal of Spec. Phil.* Monographs by Watson, Hartmann, Fischer, Bréhier, Braun, Adam, Mehlis; Bolland, *Schelling, Hegel und Fechner;* Frantz, *Schellings positive Philosophie;* works mentioned pp. 396 and 435.

Schelling was captivated by the new idealism, which explained the world of experience in terms of mind, and became an ardent exponent of the cause. He was not, however, satisfied with Fichte's conception of nature,—so far as Fichte had developed it at the time of Schelling's appearance on the scene,—with the view, namely, that nature is a product of the absolute ego in the individual consciousness and serves merely as an obstacle or incentive to the will: "nature is the material of our duty." Schelling advances to objective idealism and pantheism, as Fichte himself had done: the pure ego of epistemology becomes the absolute ego of metaphysics. If reality is, at bottom, a living self-determining process akin to the human spirit, nature cannot be conceived as a mere external impediment to the will or as a dead mechanical

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order. We can understand nature because it has kinship with us, because it is the expression of a dynamic mind, because there is life and reason and purpose in it. But reason is not necessarily *conscious* intelligence; with the Romanticists and faith-philosophers, Schelling broadens the conception of spirit, mind, or reason, so as to include the unconscious, instinctive, purposive force that manifests itself in inorganic and organic nature as well as in the highest self-consciousness of the philosopher, into which it evolves. That which is common to unconscious nature and self-conscious mind is pure activity, self-determining energy; reality is, through and through, action, life, will. The absolute ground, or source, or root, of all things is creative energy, absolute will or ego, the one all-pervading world-spirit, in which everything dwells in potency and from which everything that is actual proceeds. The ideal and the real, thought and being, are identical in their root; the same creative energy that reveals itself in self-conscious mind operates unconsciously in sense-perception, in animal instinct, in organic growth, in chemical processes, in crystallization, in electrical phenomena, and in gravity: there is life and reason in them all. The principle, which, as blind unconscious impulse, forms and moves my body, becomes conscious of itself, separates itself, as it were, from its blind, striving phase (which still goes on working unconsciously) and becomes pure spirit, pure self-consciousness. The universal ego expresses itself in me and in numberless other individual selves: in souls it becomes aware of itself. We are real in so far as we are rooted in the universal ego; we are not real as independent, isolated individuals: absolute selfhood is an illusion.

It was this thought of Schelling's that nature is visible spirit, spirit invisible nature, that gave an impetus to the Romantic imagination and encouraged the new poets to endow the world with life and mind, and to view it with a loving sympathy, which they could not feel in the presence of a dead machine.

Nature and mind, being and thought, are not, however, as Spinoza held, two parallel aspects of the Absolute, but different steps or stages or epochs in the evolution of absolute mind. The Absolute unfolds itself, it has a history: it is an evolutionary

process, the highest goal of which is self-consciousness. Just as in our own selves we rise from the unconscious or subconscious stage to clear self-consciousness and yet remain one and the same self, so the one universal ego rises from darkness to light. The graduated scale of organized objects, from inanimate nature to man, clearly betrays a creative power which only gradually evolves into complete freedom. The dead and unconscious products of nature are merely unsuccessful attempts of nature to reflect itself; so-called dead nature is an unripe intelligence, but its phenomena unconsciously exhibit the traces of reason. Nature reaches its highest goal, self-consciousness, in man; here the original identity of nature and mind is revealed to us. The most perfect theory of nature would, therefore, be one in which all the laws of nature could be reduced to laws of perception and thinking; in which the whole of nature would resolve itself into intelligence.

It is, therefore, immaterial whether we begin with nature or with mind, with the Philosophy of Nature or with the System of Transcendental Idealism; whether we ask, How does nature become (conscious) intelligence? or, How does intelligence become (unconscious) nature? The principles of knowledge and the principles of reality are the same; the question, How is knowledge possible? and the question, How is a world possible? are answered by referring to the same conditions and laws. The results will be the same; in tracing the different epochs in the history of self-consciousness, from primitive sensation up, we are, at the same time, tracing the development of the absolute principle as it manifests itself in nature. "All qualities are sensations, all bodies are percepts of nature; nature itself, with all its sensations and percepts, is a congealed intelligence."

There is the same law in all: the principle at the root of things acts in the same uniform ways, pulsates in the same rhythms everywhere. Its action is a process of expansion and contraction: the principle unfolds what is potential or implicit in it, objectifies itself, goes out of itself, so to speak, and then returns to itself enriched and enhanced: in self-consciousness nature expresses itself as subject and object, differentiates and becomes conscious of itself in the process. The different forces of nature are fundamentally the same; heat, light, magnetism,

electricity are different stages of one and the same principle, as are also inorganic and organic nature. There is also unity in the different organic forms; they constitute a graduated scale and are the products of the same principle of organization; they are all built on the same plan. All the products of nature are held together by one creative spirit; every part of it subserves the whole, of which man is the highest product and in which the goal is the realization of self-consciousness.

Schelling attempts to construct nature *a priori,* to reason out the necessary stages in the process of its evolution, as Fichte had tried to show the logical steps in the development of mind. Like Herder and Fichte before him and Hegel after him, he finds a dialectical process at work in the world, a process in which two opposing activities (thesis and antithesis) are united and harmonized or reconciled in a higher synthesis. This he calls the law of triplicity: action is followed by reaction; from the opposition a harmony or synthesis results, which, again, is dissolved in the never-ending movement of time. Hence, there can be neither dead, static substance (or changeless atoms) nor complete flux in nature; neither absolute solids nor absolute fluids, for example, but only a union of the two. Schelling applies this thought to the details of inorganic and organic nature; we find the law expressed in the series: attraction, repulsion, gravitation; magnetism, electricity, chemism; sensibility, irritability, reproduction. We shall not follow him in his account, in which poetry and science are mingled and in which fancy and logic relieve each other; it will be sufficient to remind the reader that Schelling's basal idea of nature as a dynamic evolution is a popular doctrine in contemporary science.

It is because nature is alive, because there is law, reason, purpose, in it, that we can understand it, that it can mean anything to us. It is bone of our bone and flesh of our flesh. With Fichte, Schelling rejects the old notion of the unchangeable static substance and substitutes for it the dynamic idea, the conception of universal life, of a living, creative, purposive principle of evolution, which develops from unconsciousness to consciousness, and whose ultimate end is the self-conscious reason of man. He opposes the mathematical-physical conception of nature and substitutes for it the teleological conception, or,

rather, reconciles mechanism and the older teleology in the notion of unconscious purpose. On the lower stages, the Absolute acts *as if* it had conscious purpose; it acts without intention, but it is not pushed into action, mechanically, from the outside. If the observer, who sees only the outside of the thing, its changes in appearance, its different states and stages, could place himself on the inside; if he could himself be the impulse or the movement, and be conscious of it; he would find that the impulse is not compelled from without, but compels itself from within; that acting itself out is its own will, and that it is aware of whither it is going.

Schelling's philosophy of nature contained much that was fantastic and often offered bold assertions, fanciful analogies, and brilliant figures of speech instead of proofs and facts. In attempting to force nature into its logical rubrics, it tended to withdraw the attention from details. But it aroused an interest in nature and in the study of nature, counteracted the influence of a one-sided mechanism, kept alive the *philosophical* instinct or craving for unity, which has always marked German thought, even among its leading natural scientists, and emphasized the dynamic and evolutionary conception of reality, which has again become popular to-day.

Philosophy of Mind

We shall not attempt to offer a detailed account of Schelling's philosophy of mind, as given in the *System of Transcendental Idealism,* in which his dependence on Fichte is most marked. It traces the history of self-consciousness in its different epochs, from primary sensation to creative imagination; from creative imagination to reflection; from reflection to the absolute act of will. Since there is the same principle at work in all forms of life, we shall expect the activities of mind to correspond to those found in nature; the forces of nature continue to operate in the consciousness of man. The method employed is the same as Fichte's: there could be no finite ego unless the absolute ego or energy limited its infinite activity and produced a phenomenal world; the ego could not achieve self-consciousness and freedom if it were not for such a phenomenal world. The objective world is the product of absolute reason, which produces sense-perception, the necessary categories of thought, and self-

consciousness in the individual. A further precondition of self-consciousness and freedom is life in society and in an organized State. An isolated ego could have no thought of a real world and hence no consciousness of freedom. In the State, which is the expression of unconscious universal reason, the natural selfish impulses are restrained by the universal will; individuals are unconsciously socialized and prepared for a higher ethical stage, on which they do the right, not from force, but consciously and willingly. The highest stage in the development of self-consciousness is reached in art; the creative artist imitates the creative action of nature and becomes conscious of it, becomes conscious of the activity of the Absolute; indeed, in artistic creation the Absolute becomes conscious of its own creative force. The view that art is the noblest function of man (not morality, as Fichte had taught) was popular in the golden age of German literature and in the iron age of political decadence.

In its developed state, Schelling's philosophy is a form of pantheism, in which the universe is conceived as a living, evolving system; as an organism, in which every part has its place and subserves the whole. In this sense, subject and object, form and matter, the ideal and the real, are one, together and inseparable; the one is the many, and the many are one; just as in an organism we cannot tear the part from the whole nor understand it apart from the whole, nor understand the whole without its parts. The same unity in plurality, or identity in diversity, we find in mental life; in the act of knowledge, the knower and the thing known are one.

Logic and Intuition

The question arises: How can we be sure of the truth of this system; how can we prove it? What guarantee have we that action, or life, or will, is the principle of things, and that it passes through the stages of evolution described by Schelling? His answer is not always the same. Sometimes he holds that since the world is thoroughly rational, it is self-evident that reason should understand it, and that we should be able to reconstruct it in thought. Moreover, since there is a logic in its *history,* we can reproduce the necessary stages of its evolution in our thinking. His ideal here is to produce an organic system

of knowledge, in which every judgment has its proper place, depending on other judgments and on the whole system for its truth. In this mood, he imitates Spinoza and employs the geometric method in order to make his philosophy logic-proof. In spite, however, of his attempt at a rational deduction of the progressive stages of nature and mind from the notion and purpose of the Absolute, he did not always believe that his system could be made to rest on an *a priori* universal and necessary postulate. Philosophy, he held, cannot demonstrate idealism, any more than it can prove dogmatism or materialism; a man's world-view is his free choice. The only way to prove freedom, or the reality of the creative principle, is to be a free self-determining being oneself. When we set up freedom as our ideal, we are tacitly assuming the reality of an absolute creative spirit; for, if the world were mere matter, it would be meaningless to strive to become free; belief in the ideal implies belief in a spiritual world. The will to be free, will read the world in idealistic terms. There is another argument, which Fichte had used: a free being will know what freedom is, and understand idealism. We become aware of freedom, or the Absolute, only in the spontaneous activity of intelligence and in voluntary action: in an *intellectual intuition,* which is the unique endowment of the philosopher. The living, moving element in nature, the inner meaning of reality, cannot be grasped by the scientific understanding with its spatial, temporal, and causal categories. "What is described in concepts," Schelling tells us, "is at rest, hence there can be concepts only of things, of the finite and sense-perceived. The notion of movement is not movement itself, and without intuition we should never know what motion is. Freedom, however, can be comprehended only by freedom; activity only by activity." Natural science and common-sense take a static view of things, comprehend only their *being;* philosophy knows them in their *becoming,* it is interested in the living, moving element in them. Natural science and common-sense see them only on the outside and break them up; we must know them from the inside, as they are in themselves and for themselves, and that we can do only by knowing ourselves. Perhaps we can reconcile the rationalistic and intuitionistic tendencies in Schelling's thought by declaring that intuition gives

us our principle or fundamental postulate, and that this enables us to construct a rational theory of the world.

Under the influence of a great poetic era and of the artistic atmosphere in which he lived, Schelling comes to regard this intuition as an artistic intuition. At first he conceived self-consciousness, or pure self-reflection, as the goal of the Absolute, as the highest achievement in the evolution of life and mind, and held that such a state could be experienced only in the intuition of the philosopher. Afterwards he interpreted the universe as a work of art: the Absolute realizes its purpose in the creation of a cosmos. Hence, art, and not philosophical knowledge, is the highest human function. In the products of art, subject and object, the ideal and the real, form and matter, mind and nature, freedom and necessity, are one, or interpenetrate: here the harmony sought by philosophy is achieved and lies before our very eyes,—to be seen, touched, and heard. Nature herself is a great poem, and her secret is revealed by art. The creative artist creates as nature creates, in realizing his ideal, and so knows how nature works; hence art must serve as the absolute model for the intuition of the world: it is the true organ of philosophy. Like the artistic genius, the philosopher must have the faculty of perceiving the harmony and identity in the universe: æsthetic intuition is absolute knowing. Akin to the æsthetic conception is the organic conception, as which Schelling sometimes describes intellectual intuition: it is the faculty of seeing things whole, the universal in the particular, unity in plurality, identity in diversity. He expressly declares that there is nothing mysterious in this function, but that no one can hope to be a philosopher who does not possess the power to transcend the disconnected, isolated data of experience, and to pierce through the outer shell into the inner kernel of reality.

This type of thought is diametrically opposed to the logical-mathematical method of science, against which German literature and German idealistic philosophy both protest. Goethe's entire view of nature, art, and life rested on the organic or teleological conception; he too regarded the ability to see the whole in its parts, the idea or form in the concrete reality, as the poet's and thinker's highest gift, as an *aperçu,* as a revela-

tion of consciousness that gives man a hint of his likeness to God. It is this gift which Faust craves and Mephisto sneers at as *die hohe Intuition.**

On the last stage of his philosophical development, Schelling reaches a religious mysticism: the world is conceived as a fall from God, and the goal as a return to God, to be realized in a mystical intuition in which the soul strips off its selfhood and becomes absorbed in the Absolute. In all the cases mentioned, however, the Absolute is defined as a union or identity of spirit and nature, of the infinite and the finite, and the ideal as an approximation to a knowledge of the principle, through some kind of intuition, be it in the self-consciousness of the thinker, in a free act of will, in artistic creation, or in religious feeling.

60. Friedrich Schleiermacher

In Schleiermacher we have a man of deep religious feeling and marked intellectual capacity. Religion formed the core of his thought. The problem for such a personality was to develop a conception of reality that would satisfy the intellect as well as the heart. The great philosophical movements which confronted him, and with which as a thinker he had to reckon, were the theories of Kant, Jacobi, Fichte, and Schelling and the tendencies towards Spinozism which were so prominent in Germany at the time. He was also compelled to take account of Romanticism, with many of whose representatives he came into friendly personal touch and whose mysticism appealed to his religious nature. His study of Greek idealism, particularly of Plato, whose works he translated into German, also furnished his mind with material for a *Weltanschauung.* Schleiermacher was consciously influenced by all these intellectual movements; he calls himself a dilettante in philosophy and was certainly an eclectic, a fact which accounts for many of his inconsistencies. But his eclecticism was of the independent, original type; he assimilated such elements in the culture of his age as satisfied his ethical and religious needs, and adapted them to his fundamental purpose: the construction of a great system of Protestant theology. It is owing to his

Philosophy of Religion

* Cf. Thilly, *The World-View of a Poet: Goethe's Philosophy, Hibbert Journal,* April, 1908.

understanding and appreciation of the intellectual life of his times that he came to exercise such a profound influence on religious thought and won for himself the title of the founder of the new theology.

Friedrich Daniel Ernst Schleiermacher was born in Breslau, 1768, and received part of his education in the schools of the Moravian brotherhood, a pietistic sect. Influenced by the new critical philosophy, he continued the study of theology and philosophy at the University of Halle (1787-1790), served as a tutor, and then entered the ministry (1794). In 1809 he became preacher of Trinity Church at Berlin, and in 1810 professor of theology at the new University, which positions he filled until his death in 1834. In Berlin he came under the influence of the leaders of the Romantic school, but did not follow them in their extreme teachings. Although Schleiermacher achieved his greatest distinction as a theologian, he has gained substantial fame in the history of philosophy as a student of the sources.

Works: *Reden über die Religion,* 1799 (transl. by Oman); *Monologen,* 1800; *Kritik der bisherigen Sittenlehre,* 1803; translations of Plato's *Dialogues,* with introductions and notes, 1804-1828; *Der christliche Glaube,* 1821-1822. Complete works, 1834-1864; selected works by Braun.

Selbie, *Schleiermacher;* Cross, *The Theology of Schleiermacher;* Fuchs, *op. cit.;* Dilthey, *Das Leben Schleiermachers,* vol. I; Cramaussel, *La philosophie religieuse de Schleiermacher;* works mentioned on pp. 396, 435, 450.

Schleiermacher rejects the idealism of Fichte, so far as it seeks to derive all reality from the ego, and assumes the existence of a real world. We are compelled to infer a transcendent ground of all thought and being; all particular things have their source in a principle that is the absolute unity of both, the principle of identity, in which all differences and oppositions are resolved. We know the nature of things themselves and not merely phenomena, as Kant had taught. But owing to the perceptual nature of our thinking, we cannot reach an *adequate* knowledge of the original source of things; thought moves in opposites and can never realize absolute identity. The problem is to know the absolute principle, the identity of thought and being, God; but the very nature of this principle precludes all possibility of rational knowledge. It can never be realized, but only approximated: conceptual thinking can never free itself from differences and opposites, whereas the ultimate ground is without differences and opposites. Hence, philosophy is not Science, but *Wissen-*

Knowledge and Faith

schaftslehre, Science of Knowledge: it is the art of thinking, or dialectics; it is the product of social or coöperative thought and teaches us how to approximate to the goal. Nor can we reach an adequate knowledge of God through practical reason, in the Kantian way. The fact is, Schleiermacher already possesses his touchstone of truth in his notion of God, and on this his conception of knowledge depends: human intelligence, with its habit of pulling things apart, cannot comprehend the unity of the divine nature.

We realize the ideal only in religious feeling or in divining intuition; in feeling we come into direct relation with God: the absolute unity or identity of thought and being, which we cannot define in conceptual terms, is immediately experienced in self-consciousness. Religion is the feeling of absolute dependence on an absolute world-ground; it is the immediate consciousness that everything finite is infinite and owes its existence to the infinite, that everything temporal is eternal and rests in the eternal. Schleiermacher opposes the shallow rationalism of the *Aufklärung* with its theological proofs, as well as the orthodox utilitarian conception of God as the dispenser of rewards and punishments, and, likewise, refuses to ground religion on ethical conviction, as Kant and Fichte had done. According to him, religion does not consist in theoretical dogmas or rationalistic proofs, any more than in acts of worship and moral conduct. Since God cannot be *known,* theology must be a theory of religious feeling; its function is to formulate and to bring to clear consciousness the implications of religious feeling.

This Schleiermacher proceeds to do in his theology, which represents a fusion of Spinozism and idealism that was quite common in Germany at the beginning of the nineteenth century. The Absolute is conceived organically, in analogy with the human mind, as unity in diversity, as the identity of thought and being. Schleiermacher did not consistently carry out the Spinozistic idea, but attempted to combine his pantheism with dualism. God and the world are one, true; but things are not mere essenceless forms; the world has a relative independence. A legitimate theory of the universe must affirm the inseparableness of

God, the World, and the Individual

God and the world,—God has never been without a world, nor the world apart from God,—and yet it must distinguish between the idea of God and the idea of the world: God is a spaceless and timeless unity; the world, a spatial-temporal plurality.

We cannot ascribe personality to God, for that would make him finite. Nor can we attribute infinite thought and will to him, for these terms contradict each other; all thinking and willing are by their very nature necessarily finite. God is the universal creative force, the source of all life: so Herder, Goethe, Fichte, and Schelling had interpreted the Spinozistic substance.

The relation of the individual to the Absolute is conceived in a way to preserve some measure of freedom and independence to the former. The individual egos are self-determining principles: freedom means (as for Leibniz) the natural evolution of individual capacity or endowment. Yet, they are imbedded in the universal substance, as it were; they are articulate members of the universe, and as such their individual nature must conform to the universe. Each particular ego, however, has its specific talent or gift; it occupies a place in the whole of things that is absolutely necessary, and must, therefore, give expression to its own individuality in order that the nature of the whole may be realized. The high value which Schleiermacher places on personality, and his insistence on self-development and self-expression, are characteristic of the Romantic tendencies in German thought. It is this individualistic bent which, in spite of the feeling of absolute dependence, prevented him from sinking the human soul in the universal substance, and which gave rise to his individualistic ethics. He had little sympathy with Kant's rigoristic morality and the dualism between reason and nature, a dualism which can never be bridged unless the subjective will and the objective will are united in the original natural will.

Reason and will exist in nature as well as in man; morality is a higher development of something that already manifests itself in nature in a lower form. The reason immanent in nature is identical with that of the self-conscious subject: there is no irreconcilable conflict between the natural law and the moral law. The ideal is not the destruction of the lower impulses, but

the unfolding of the individual's peculiar nature in the harmony of the whole. The ethical value of the acts of each personality consists in their uniqueness: hence, be a unique person and act in accordance with your own peculiar nature. Even in religion the individual should be left free to express himself in his own unique and intimate way. This teaching is not to be interpreted as a selfish individualism; for, according to Schleiermacher, the consciousness of the value of one's own personality carries with it the appreciation of the worth of others. The sense of universality (*der allgemeine Sinn*) is the highest condition of one's own perfection. Hence, the ethical life is a life in society, in a society of unique individuals who respect humanity in its uniqueness, whether in themselves or in others. "The more each becomes like the universe, the more fully he communicates himself to others, the more perfect will be the unity of all; . . . rising above themselves and triumphing over themselves, they are on the way to true immortality and eternity." It is the religious feeling, however, that illuminates one's entire life and brings unity into it. In the feeling of piety man recognizes that his desire to be a unique personality is in harmony with the action of the universe; "religion regards all events in the world as the acts of God." Personal immortality is out of the question; the immortality of religion consists in becoming one with the infinite; to be immortal is "to be eternal in every moment of time."

61. Georg Wilhelm Hegel

Hegel and his Predecessors

Both Fichte and Schelling had proceeded from Kantian presuppositions: mind is the principle of knowledge; all philosophy is ultimately a philosophy of mind, in which forms and categories constitute the significant fact. Both accepted the dynamic view of reality: for both the ideal principle is an active living process. And, in spite of Romantic tendencies, both employed the logical method, seeking to explain the world of experience by exhibiting the conditions without which such experience would be impossible. We have seen how Schelling modified Fichte's earlier view, or at least elaborated it in several important respects. We may say that

in Schelling philosophy again becomes metaphysics: nature and mind are conceived as progressive stages in the evolution of an absolute principle that expresses itself in the inorganic and organic realms, in individual and social life, in history, science, and art. The results of critical epistemology are applied in ontology; the necessary forms of thought are regarded also as necessary forms of being. Nature takes an important place in his thinking: unconscious processes are at work, not only in the so-called inanimate sphere, but in history, society, and the human mind as well. The rigorous logical method followed by Schelling in some of his early writings is gradually supplemented or replaced: æsthetic intuition becomes the organ of knowledge and the æsthetic ideal is set up, in place of the Fichtean ethics, as the goal of human development.

Hegel builds on the foundations laid by Fichte and Schelling. He agrees with the former in insisting on a logical method,—indeed, he undertakes to put the world-view of his friend Schelling on a rational scientific basis,—with the latter, in identifying logic with ontology or metaphysics; with both in conceiving reality as a living developing process. For him, too, nature and mind or reason are one; only, he subordinates nature to reason. Indeed, for him, all being and reason are identical; the same process that is at work in reason, is present everywhere; hence, whatever is real is rational, and whatever is rational is real. There is, therefore, a logic in nature as well as in history, and the universe is at bottom a logical system. The Absolute, then, is not an undifferentiated absolute, "in which all cows are black," as Schelling had taught (according to Hegel), but reason itself. Nor is the Absolute so much a substance (Spinoza) as a subject, which means that it is life, process, evolution, as well as consciousness and knowledge. All motion and action, all life, are but an unconscious thinking; they follow the law of thought; hence, the more law there is in nature, the more rational is its activity. And, finally, the goal toward which the developing Absolute moves is self-consciousness; the meaning of the entire process lies in its highest development: in the realization of truth and goodness, in the realization of a mind that knows the meaning and purpose of the universe and identifies itself with the universal purpose.

Georg Wilhelm Friedrich Hegel was born in Stuttgart, 1770, studied theology and philosophy at Tübingen (1788-1793), and held private tutorships in Switzerland and in Frankfort, from 1794 to 1801. In 1801 he established himself at Jena, receiving a professorship in 1805, which he was compelled to relinquish after the battle of Jena, in 1806. After serving as the editor of a newspaper in Bamberg (1806-1808) and as director of the gymnasium at Nuremberg (1808-1816), he was called to the professorship of philosophy at Heidelberg and then to Berlin, where he exercised a great influence and won many adherents. In 1831 he died of the cholera.

Works: *Phänomenologie des Geistes,* 1807; *Logik,* 1812-1816; *Encyclopedie der philosophischen Wissenschaften,* 1817; *Grundlinien der Philosophie des Rechts,* 1821. His lectures on the History of Philosophy, Æsthetics, Philosophy of Religion, Philosophy of Right, and Philosophy of History were published by his pupils after his death, in the *Complete Works,* 19 vols., 1832, ff. *Das Leben Jesu,* 1795, was published in 1906, *System der Sittlichkeit,* 1893. New ed. of separate works by G. Lasson, Bolland, Drews, and in *Phil. Bibl.* Translations: *Logic,* vol. II, by Harris; *Encyclopedia: Logic* and *Philosophy of Mind,* by Wallace; *Phenomenology,* by Baillie; *Philosophy of Right,* by Dyde; *History of Philosophy,* by Haldane; *Philosophy of History,* by Sibree; *Philosophy of Religion,* by Speirs; *Philosophy of Art:* Introduction, by Bosanquet; Part II in *J. of Spec. Phil.,* by Bryant; abridged tr. by Hastie.

E. Caird, *Hegel;* Hibben, *Hegel's Logic;* W. Wallace, *Prolegomena to the Study of Hegel's Philosophy;* Stirling, *Secret of Hegel,* 2 vols.; Baillie, *Origin and Significance of Hegel's Logic;* Harris, *Hegel's Logic;* McTaggart, *Commentary on Hegel's Logic,* and *Studies in the Hegelian Dialectic* and *Cosmology;* A. Seth, *Hegelianism and Personality;* G. W. Cunningham, *Thought and Reality in Hegel's System;* M. Mackenzie, *Hegel's Educational Theory and Practice;* Haym, *Hegel und seine Zeit;* K. Fischer, *Hegel;* Ulrici, *Princip und Methode der hegelschen Philosophie;* Croce, *Lebendiges und Totes in Hegels Philosophie* (German transl.); Noël, *Logique de Hegel;* Dilthey, *Jugendgeschichte Hegels;* Nohl, *Hegels theologische Jugendschriften;* P. Barth, *Geschichtsphilosophie Hegels;* Bolland, *Hegels Philosophie des Rechts,* and *Philosophie der Religion;* Morris, *Hegel's Philosophy of State and of History;* works on post-Kantian philosophy, pp. 396, 450.

Problem of Philosophy

It is the business of philosophy, according to Hegel, to know nature and the entire world of experience as it is, to study and comprehend the reason in it;—not the superficial, transitory, and accidental forms, but its eternal essence, harmony, and law. Things have a meaning, the processes in the world are rational: the planetary system is a rational order, the organism is rational, purposive, full of meaning (*sinnvoll*). Since reality is at bottom rational, a necessary *process* of thoughts or notions, a logical process, it

can be known only by thought; and the function of philosophy will be to understand the laws or necessary forms according to which reason operates. Logic and metaphysics will, therefore, be one and the same. The world, however, is not static, it moves on, it is dynamic; so is thought, or reason; the *notion,* or the true concept, is an active, moving process, a process of evolution. In evolution, something that is undeveloped, undifferentiated, homogeneous, as we should say, and in this sense abstract, develops, differentiates, splits up, assumes many different, hence opposing or contradictory forms, until at last we have a unified, concrete, particularized object, a unity in diversity. The indefinite, abstract ground from which we have proceeded has become a definite concrete reality in which the opposites are reconciled or united in the whole. The higher stage in the process of evolution is the realization of the lower, it is really what the lower intends to be; in this sense, it is the truth of the lower, the purpose of the lower, the meaning of the lower. What was implicit in the lower form becomes explicit or is made manifest in the higher. Every stage in the process contains all the preceding stages and foreshadows all the future ones: the world at every stage is both a product and a prophecy. The lower form is negated in the higher, that is, it is not what it was; but it is also preserved in the higher, it has been carried over and sublated. All these ideas Hegel expresses by the German word *aufgehoben;* and the process, in the thing, of passing over into its opposites he calls the *dialectical process.*

This is what Hegel means when he declares that contradiction is the root of all life and movement, that everything is contradiction, that the principle of contradiction rules the world. Everything tends to change, to pass over into its opposite. The seed has in it the impulse to be something else, an other: to contradict itself and to transcend itself. Without contradiction there would be no life, no movement, no growth, no development; everything would be dead existence, static externality. But contradiction is not the whole story; nature does not stop at contradiction, but strives to overcome it; the thing passes over into its opposite, true, but the movement goes on and oppositions are overcome and reconciled, that is, become parts of a unified whole. The opposites are opposites with respect to one

another, but not with respect to the unity or whole of which they form the parts. Taken by themselves, they have no value or meaning, but considered as planfully articulated parts of a whole,—of a process,—they have value and meaning. They are expressions of the *notion* of the thing, of its reason or purpose. In realizing its purpose, its notion, or *Begriff*, the thing overcomes the contradiction between its being and its notion, between what it now is and what it has it in it to be. Thus, for example, all nature strives to overcome its material being, to divest itself of its phenomenal encumbrances and to make manifest its true essence, to put on immortality.

Again, the universe is a process of evolution, in which ends or purposes are realized, the purposes of universal reason. This is an organic or teleological conception. The complete organism is the realization of the purpose or form or notion or concept of the organism, the truth of the organism, as Hegel would say. The important thing in evolution is not merely what existed at the beginning, but what happens or is made manifest at the end. The truth lies in the whole, but the whole is realized only in the completed process of evolution; being is at the end what it is in truth. And so we may say that the Absolute is essentially a result; the result as such, however, is not the complete whole; the result together with the entire process of development is the true whole; the thing is not exhausted in its purpose, but in its achievement (*Ausführung*).

Hence, philosophy is interested in results; it has to show how one result emerges from the other, how it *necessarily* emerges from the other. This movement proceeds unconsciously in nature and even in history (Schelling). But the thinker can become conscious of the process; he may describe it, rethink the concepts. He has reached the highest stage of knowledge when he has grasped the Idea of the world, when he knows its meaning, when he can retrace the operations of the universal dynamic reason, its categories, its notions. The concepts in his head are of the same nature as the universal concepts; the dialectical evolution of the concepts in the mind of the philosopher coincides with the objective evolution of the world; the categories of subjective thought are likewise categories of the universe; thought and being are identical.

Now, if the business of philosophy is to follow the nature of things, to tell us the what, the why, and the wherefore of reality, the existence, ground or essence, and purpose of things, its method must be suited to its end. The method must reproduce the rational process, or the course of evolving reason in the world. This object cannot be attained by the artistic intuitions of genius or in similar mysterious ways, as Schelling and others supposed; there is no other way than that of hard thinking. Philosophy is conceptual knowledge, *Begriffswissenschaft,* as Kant had declared. But, Hegel notes, we cannot exhaust reality in *abstract* concepts; reality is a moving dynamic process, a dialectical process, which abstract concepts cannot faithfully represent: the abstract concept tells only a part, and only a small part, of the story. Reality is now this, now that; in this sense it is full of negations, contradictions, and oppositions: the plant germinates, blooms, withers, and dies; man is young, mature, and old. To do a thing justice, we must tell the whole truth about it, predicate *all* these contradictions of it, and show how they are reconciled and preserved in the articulated whole which we call the life of the thing. Ordinary abstract thought takes the existing things in isolation, it looks upon them as the true realities, and considers their special phases and oppositions by themselves. The intellect can do nothing but distinguish, oppose, and relate; it cannot conceive the unity of opposites, it cannot understand life and the inner purposiveness of things; hence, for example, it can only wonder at animal instinct and its works. The intellect looks down upon the speculative method, but it can never grasp life as such. Conceived by themselves or torn from their relations, the contradictory aspects of things are meaningless appearances; they can be understood only as parts of an organic, articulated system; or, as Hegel puts it, all existence has truth only in the Idea, for the Idea is the only true reality. One Idea pervades the whole and all the parts of the whole; all particulars have their reality in this unity. The activity which sees things whole, or unifies the opposites, is a higher function of mind, which, however, let it be remembered, cannot dispense with the intellect. The two functions work hand in hand.

Dialectical Method

Thought will, therefore, proceed from the most simple, ab-

stract, and empty concepts to the more complex, concrete, and richer ones, to *notions*. Hegel calls this method, which we already find indicated in Kant and employed by Fichte and Schelling, the *dialectical* method, and, with them, distinguishes in it three moments or stages. We begin with an abstract universal concept (thesis); this concept gives rise to a contradiction (antithesis); the contradictory concepts are reconciled in a third concept which, therefore, is a union of the other two (synthesis). To illustrate: Parmenides held that being is permanent, Heraclitus that it is in constant change, the Atomists that it is neither and both, that something is permanent and something changes. The new concept, however, suggests new problems and contradictions, which, in their turn, must be resolved in other concepts. And so the dialectical process, which seeks to follow the evolution of reality, goes on until we reach an ultimate concept or notion in which all oppositions are resolved and preserved. But no single concept, not even the highest, represents the whole truth; all concepts are only partial truths; truth or knowledge is constituted by the entire system of concepts, every one of which has evolved from a basal concept. Truth, like rational reality itself, is a living logical process.

Or to say it in other words: One thought follows necessarily from the other, one thought provokes a contradictory thought with which it is united to form another thought. The dialectical movement is the logical self-unfolding of thought. Hegel speaks as though thoughts or notions thought themselves: there is an inner necessity in them, they are like a growing organism that unfolds its capacities and becomes a concrete organized whole, a concrete universal. Hence, all the thinker has to do is to let his thought follow its logical course in the manner described; since this process, if correctly carried on, is identical with the world-process, it will be a reproduction of the development immanent in things. In this way, we can think God's thoughts after him.

Speculative or dialectical thinking, then, is a process that seeks to do justice to moving, living, organic existence, a process in which differences are reconciled, in which distinctions are not merely made, but comprehended. The philosophical notion is an organic unity of differences, a totality of parts, a unified

and yet differentiated whole. When Hegel tells us that the concrete universal notion is the synthesis of opposites, he wishes to describe the nature of thought as well as the nature of reality. Being is what the Romanticists were fond of calling it: a flowing reality, something akin to life and mind. And,—again the Romanticists were right,—being cannot be grasped by an abstracting intelligence that catches only general phases or glimpses of it, cuts it into pieces, and ignores its organic character. But it cannot be realized by mystical feeling, æsthetic intuitions, or happy guesses. It is a rational process, a process that has a meaning and must be *thought*. It is not an insane flux, an unbridled, absolutely meaningless happening, but an orderly evolution, a progress. By its fruits we shall know it; in the light of the goal it achieves, all its seeming oppositions and contradictions are understood and reconciled. Our attempts to split up reality into essence and appearance, inner and outer, substance and attribute, force and its expression, the infinite and the finite, mind and matter, God and world, give us nothing but false distinctions and arbitrary abstractions. *Natur hat weder Kern noch Schale:* the essence *is* the appearance, the inner *is* the outer, the mind *is* the body, God *is* the universe, and so on.

Thought and Being

Reality, then, is a logical process of evolution. It is a spiritual process, and we can, therefore, understand it only in so far as we experience such a process in ourselves. But, let us not forget, it is not the particular ideas, the empirical or psychological content, which we find in ourselves, that give us such understanding. There is a rational necessity in all thought that must be reproduced by us. Our thinking evolves or develops rationally; it moves logically, genetically, dialectically: in this sense, it is universal, trans-empirical, transcendental, or metaphysical, as Hegel calls it. Nor is truth expressed in this or that individual, it manifests itself in the species, it grows out of the life of the race. The divine mind or reason expresses itself in the evolution of the racial consciousness, in human history. But, it must always be remembered, only in so far as human history is rational, necessary, logical, can we speak of it as expressive of the divine reason.

Hegel calls God Idea, meaning the potential universe, the timeless totality of all the possibilities of evolution. Spirit or Mind (*Geist*) is this Idea realized. The Idea contains within itself, *in posse,* implicitly, ideally, the entire logical-dialectical process which unfolds itself in a world; in it all the laws of its evolution are *outlined* which express themselves in the form of objective existence. The Idea is the creative logos or reason; its forms of action or categories are not empty husks or lifeless ideas, but objective thoughts, spiritual forces which constitute the very essence of things. The study of the creative logos, in its necessary evolution, is logic. It is not meant by this teaching that God as pure thought or logical Idea existed before the creation of the world; for Hegel declares that the world was eternally created. The divine mind can never be without self-expression; God is the living moving reason of the world, he reveals himself in the world, in nature and in history; nature and history are necessary stages in the evolution of God into self-consciousness. (The evolution is not temporal in the sense that there ever was a time when there was no evolution. The Absolute is eternally that into which it develops: the categories are eternally potential in it, they have never evolved out of nothing. Nevertheless, the categories are developed successively, one after the other, one being the condition of the other.) God is not absorbed in the world, nor the world absorbed in God; without the world God is not God, he cannot be without creating a world, without knowing himself in his other. There must be unity and opposition in the Absolute: God is not separate from the world. The finite world could not exist without the Idea, it is not an independent thing and has no real being without God: whatever truth it has it owes to God. Just as in our minds thoughts and feelings come and pass away without exhausting the mind, so the phenomena of nature come and go without exhausting the divine mind. And just as our mind is enriched and enlarged by its thoughts and experiences, and rises to fuller and fuller self-consciousness in and through them, so the divine Idea is enriched by its self-expressions in nature and history, and rises through them to self-consciousness, becoming *for itself* what it was *in itself.* In the rhythmical process of self-alienation and self-deliverance, the universal mind realizes its destiny: it

thinks itself in its object and so comes to know its own essence. The Absolute becomes conscious only in evolution, and above all in man. Hegel, therefore, does not mean that God, or the logical Idea, exists as a self-conscious logical process before the creation of the world,—he cannot be conscious without a world;—he is a developing God and becomes fully self-conscious only in the minds of human beings who make explicit the logical-dialectical process that lies implicit in the universal absolute reason.

From all this it must appear that logic is the basal science, since it reproduces the divine thought-process as it is in itself. Dialectical thought expresses the innermost essence of the universal mind; in such thinking the universal mind knows itself as it is; here thought and being, subject and object, form and content are one. The forms or categories of thought which logic evolves are identical with the forms of reality: they have both logical and ontological or metaphysical value. In the essence of things thought recognizes its own essence, seeing it as in a mirror. Reason is the same everywhere, and everywhere the divine reason is at work: the universe, or that which is real and eternal in it, is the result of the thought of God. Hence it makes no difference where we begin: whether we study reason, the dialectical process, in ourselves (logic) or in the universe (metaphysics), we shall always reach the same results. In logical thinking, pure thought may be said to study itself, thinker and thought are one; and in it, also, the thinker develops with his thinking. The other sciences are applications of logic: the philosophy of nature studies the Absolute, or universal reason, in its otherness, in its self-objectification or self-alienation; the philosophy of mind shows how reason overcomes objective nature, returns to itself, as it were, or evolves into self-consciousness.

Logic and Metaphysics

It is to be noted that in all these cases of the revelation of reason, whether as nature or mind, reason appears in an infinite variety of temporal and transitory forms. These accidental shapes showing on the surface are not the object of philosophy. It is the business of philosophy to understand the reason in things, the essence or substance of nature and mind, the eternal harmony and order, the immanent law and essence of nature, the meaning or rationale of human institutions and of history,

the eternal element shining through the temporal and accidental, the inner pulse beating in the external shapes. Moreover, this reason in things we can know only conceptually, through the notion, through dialectical or logical thought; hence, the only knowledge worthy of the name is *a priori* or philosophical knowledge: *philosophy* of nature, *philosophy* of right, *philosophy* of history.

Philosophy of Nature and Philosophy of Mind

Logic deals with concepts, it shows how one concept springs from the other, that there is a necessary evolution in thinking, that if we think correctly, we are bound to pass from stage to stage until we reach the highest stage, the culmination and completion of the process, the epitome of all the others. When we think these concepts, we are in the world of true reality, the eternal, imperishable process of the universe. The system of concepts which we think in logic, forms an organic whole and represents the true essence of things. It is not merely something in our heads; we find it revealed in the world-process, in nature and in mind, in the individual mind and in the social mind, in the history of the world and in human institutions. In logic, however, we envisage reason in its purity, in its nakedness, as it were; in this sense, it is a shadow-world of essenceless forms, the logical Idea, God before he created the world. It is a shadow-world because it lacks substance or body, because it is *naked* thought, because it is not clothed in the garments of a universe. This is what Hegel means when he states that logic has no actual being, that it is never actualized except in the thinking of man: outside of human thinking, universal reason is more than pure thought. We are not concerned, in logic, with its revelations, with nature, history, society, but with a system of truths, a world of ideas, as it is in itself. But we can also study it in its revelations, we can see how this skeleton, or framework, takes on flesh and blood, or, rather, we can see it in flesh and blood. In nature, reason reveals itself in its otherness, in its externality and succession, in space and time. We cannot truly say that the logical Idea passes over into nature: the logical Idea *is* nature, nature is a form of the logical Idea, it is the Idea in its spatial and temporal form. Nature is reason, it is conceptual, it is the *Begriff* in its " side-by-

sideness," the notion in the form of extension. Hegel calls it petrified intelligence, an unconscious intelligence, concepts spread-out, so to speak. Moreover, nature is a stage of transition through which the logical Idea passes, in its evolution into mind or spirit (*Geist*). That is, the Idea, which embodies itself or is externalized in nature, returns into itself and becomes mind, or spirit: in mind the Idea reveals itself to itself.

Mind or spirit passes through dialectical stages of evolution, revealing itself as subjective mind, objective mind, and absolute mind. Subjective mind expresses itself as soul (mind dependent on nature), consciousness (mind opposed to nature), and spirit (mind reconciled with nature in knowledge): corresponding to these stages, Hegel has the sciences of anthropology, phenomenology, and psychology. The Idea, or universal reason, becomes soul in the animal organism. It embodies itself, creates a body for itself, becomes a particular, individual soul, the function and vocation of which is to exercise its peculiar individuality; it is an unconscious production. This soul, which has fashioned an organic body for itself, becomes conscious of itself, distinguishes itself from its body; consciousness is an evolution from the very principle of which the body is the expression. The function of consciousness is knowing. It rises from a purely objective stage, in which it regards the sensible object as the most real and truest thing, to a stage in which reason is conceived as the innermost essence of both self-consciousness and objective reality. Mind or spirit (*Geist*) in the highest sense unites both functions: it is productive knowing. We really know only what we create or produce. The objects of the spirit are its own products; hence, its essence, especially that of theoretical spirit, consists in knowing. Spirit or intelligence immersed in the object is perception. No one can speak or write illuminatingly of an object without living in it spiritually, *i.e.*, without intuiting it in the true sense of the term. Knowledge is completed in the pure thinking of conceiving reason. Presentation (*Vorstellung*, memory, imagination, association) is the mean between perception and reason. Reason evolves or unfolds concepts, *i.e.*, conceives by pure thought the self-development of concepts. The understanding or intellect judges (*urteilt*), that is, separates the elements of the concept; reason

concludes, that is, binds together the elements of the concept. In the development of pure thought, theoretical intelligence sees through itself, knows itself; it becomes reason recognizing itself.

Intelligence or reason is the sole ground of its development; hence, the result of its self-knowledge is the knowledge that its essence is self-determination or will or practical spirit. Will appears as a particular subject or natural individual, striving for the satisfaction of his needs or deliverance from his ills. The will immersed in its impulses is unfree.

The Idea, or universal reason, expresses itself not only in nature or in individuals, but in human institutions and in history, in right or law (property, contract, punishment), in morality or conscience, in custom (*Sitte*) or ethical observances (family, civic society, State). In these institutions and in history reason realizes itself or becomes actual, *i.e.,* appears in external form; in this sense it is called *objective* reason. The reason which has produced human institutions is the same as that which seeks to understand them: the reason which has unconsciously evolved law, custom, and the State becomes conscious of the process in the philosophy of right. It is not the business of such a philosophy to tell us what the State ought to be, but to know it *as it is,* that is, to exhibit the reason immanent in it; and that can only be done by dialectical thinking. It is the function of philosophy to show how rational institutions follow from the very Idea or nature of right or justice. In studying institutions, it is possible to explain them historically, to show to what conditions, circumstances, and so forth, they owe their existence. But such a causal explanation is not the true philosophical explanation; it is one thing to trace the historical evolution of institutions, to point out the circumstances, needs, events, which led to their establishment; another, to demonstrate the justice in them and their rational necessity. We can understand the reason of right, law, custom, State, only when we understand the notion of the thing (*den Begriff der Sache*).

Philosophy of Right

Objective reason is realized in a society of free individuals in which the individual wills the laws and customs of his people. In such a society the individual subordinates his subjective con-

science (morality) to universal reason; in custom or the ethical observances of his people (*Sitte*) he finds his universal and true self expressed: he recognizes in the laws his own will and in himself a particularized expression of the laws. The evolution of the ethical spirit into a community of self-conscious individuals is the result of the evolution of active reason. After many experiences in society, the individual learns that in willing a universal cause he is willing his own will, or is free. The real and the ideal are one here: individual reason accepts universal reason as its own; the individual abandons his subjectivity and subordinates his individual reason to the universal reason, which expresses itself in the *Volksgeist*, in the consciousness of a people, in the national mind: this is *Sittlichkeit*. The perfect State, which realizes perfect freedom, is the goal and purpose of universal history: progress means the development of the consciousness of freedom. The various peoples and the great historical personalities are the instruments by which the universal spirit realizes its ends: every great people has a mission to perform in the divine evolution and can be understood only in the light of the total development. When it has accomplished the purpose of its existence, it makes way for other stronger nations. The conquest of one nation by another is a confession that the Idea for which the one stands is subordinate to that of the victorious people: here might makes right, physical power and rational justice coincide. War, in so far as it is a war of ideas, is justified by Hegel on the assumption that the stronger cause will defeat the weaker and that the progress of humanity is furthered by physical and moral conflict: *Die Weltgeschichte ist das Weltgericht*. Providence, or universal reason, also makes use of the passions and private interests of individuals to realize universal ends: this is the strategy of the Idea; great men are the executives of Reason. In his *Philosophy of History* Hegel tries to show how the universal spirit realizes the purposes prescribed by the dialectical evolution of its essence.

In none of the preceding stages of the development of mind, however, does the universal mind come to know itself as it is, or reach the highest plane of self-consciousness and freedom. In none of them can it be said that thought and being, subject

and object, are one, or that all the oppositions are fully reconciled. The supreme stage in the evolution of the logical Idea is the Absolute Mind, whose sole purpose and work consist in making manifest to itself its own nature, and which is, therefore, free and unlimited spirit. Every particular subject as a truly knowing subject is such an absolute subject. The Absolute Mind likewise passes through three stages: revealing itself in the art, the religion, and the philosophy of the human mind. The Absolute Mind expresses its essence or truth in the form of intuition (*Anschauung*) in art; in the form of presentation or imagination (*Vorstellung*) in religion; in the form of conception or pure logical thought (*Begriff*) in philosophy. The mind perceiving its inner essence in perfect freedom is art, the mind imaging it reverently is religion, the mind conceiving and knowing it in thought is philosophy. "Philosophy too has no other object than God and is, therefore, essentially rational theology, as well as an enduring worship of God in the service of truth." Every one of these forms realizes itself in the dialectical process of evolution and has its history: the history of art, the history of religion, and the history of philosophy.

Art, Religion, and Philosophy

In the history of philosophy every great system has its necessary place and represents a necessary stage in logical development. Each system provokes an opposing one; the contradiction is reconciled in a higher synthesis, which, in turn, gives rise to new conflicts, and so on. The Hegelian philosophy,—so its author believes,—represents the final synthesis in which the Absolute Mind becomes conscious of itself: it recognizes the content of its being in the historical development through which it has passed.

From 1820 to 1840 Hegel's system was the reigning philosophy in Germany. It enjoyed the favor of the Prussian State, and had representatives in nearly every German university. What made it particularly attractive to many thinkers was its logical method,—which seemed to avoid both the rigid abstractions of rationalism and the easy fancies of mysticism,—its claim to absolute certainty, and its apparent success in overcoming difficulties and solving

Hegelian Schools

problems in nearly every field of human study. After the death of the master, the school divided into conservative and liberal groups. Differences arose with regard to theological questions,—God, Christ, and immortality,—upon which Hegel had not expressed himself definitely. The conservatives interpreted the system in the orthodox supernaturalistic sense, as teaching theism, personal immortality, and an incarnate God (Hinrichs, Goeschel, Gabler), while the liberals, the so-called Young Hegelians, held to a spiritualistic pantheism: God is the universal substance which becomes conscious in mankind. Mind as such is eternal, that is, the universal mind, not the individual mind. The incarnation of God in Christ is interpreted as the expression of the divine in humanity. To this wing belonged Richter, Ruge,—also, for a time, B. Bauer, D. Strauss, and L. Feuerbach. Some of the liberal Hegelians eventually went over to naturalism, among them B. Bauer, Strauss, and Feuerbach. Hostile to Hegelianism, yet in sympathy with the theistic views of the right wing, were C. H. Weisse, J. H. Fichte, and H. M. Chalybaeus.

The early socialists (Marx and Lassalle), with their economic interpretation of history, also based themselves on Hegelian premises. What was once rational, they reasoned, becomes irrational in the process of evolution: private property, which was once right and rational, will be superseded and overcome in socialism as a result of the dialectical-logical process of history.

The impetus which Hegel gave to the study of the history of philosophy and the history of religion produced a school of great historians of philosophy (Trendelenburg, Ritter, Brandis, J. E. Erdmann, E. Zeller, Kuno Fischer, W. Windelband) and of religion (O. Pfleiderer). He likewise exercised a great influence on the philosophy of history, the study of jurisprudence, politics, and indeed on all the mental sciences.

For the period after Hegel see: Siebert, *Geschichte der neuern deutschen Philosophie nach Hegel;* Ueberweg-Heinze, *op. cit.,* Part III, vol. II; Külpe, *Philosophy of the Present in Germany,* transl. by G. Patrick; and works on p. 396.

GERMAN PHILOSOPHY AFTER HEGEL

62. Realism of Johann Friedrich Herbart

Opposition to Hegelianism

The Hegelian philosophy, however, likewise aroused great opposition and gave rise to reactionary movements, the most extreme of which rejected all metaphysics as a futile undertaking. Every phase of the new German movement was subjected to attack: its idealism, its pantheism, its rationalism, and its *a priori* methods. Some thinkers insisted on exacter scientific methods, and reached results at variance with the new philosophy: realism and pluralism. Others refused to follow the view that the world was rational and pointed out the irrational elements in reality of which philosophy would have to take account. Still others, following in the wake of mysticism, faith-philosophy, and intuitionism, sought the answer to the world-riddle in other functions of the mind than reason. The two greatest opponents of the so-called speculative philosophy are Herbart and Schopenhauer: both of them regard themselves as the true successors of Kant, both are interested in the natural sciences, and both seek a basis for their thought in the facts of experience. Both offer systems of metaphysics: Herbart a pluralistic realism that harks back to Leibniz; Schopenhauer a pantheistic idealism that resembles Schelling's *Naturphilosophie* and a voluntarism that is reminiscent of Fichte's philosophy and Schelling's later view.

Among the works of Herbart are: *Einleitung in die Philosophie,* 1813; *Psychologie als Wissenschaft,* 1824-1825; *Allgemeine Metaphysik,* 1828-1829; *Allgemeine Pädagogik,* 1806; *Allgemeine praktische Philosophie,* 1808. Complete works, by Hartenstein, 13 vols., 2d ed., 1883-1893; by Kehrbach, 15 vols., 1887, ff.; pedagogical works by Willmann, 2 vols., 2d ed., 1880. Transl. of *Lehrbuch der Psychologie* by M. K. Smith. Works on Herbart by Kinkel, Franke, Wagner, Strümpell, Lipps, Kaftan, Drobisch. Cf. Ribot, *Contemporary German Psychology,* transl. by Baldwin, and the histories of psychology.

In Johann Friedrich Herbart (1776-1841) we have an independent critical thinker who opposes the entire idealistic movement, as it had developed in Germany after Kant. He had already studied his Kant and the pre-Kantian rationalists before he came to Jena, where he heard Fichte (1794) and afterward served

as private docent and professor (1802-1809). He regarded the new philosophy as an aberration from the principles laid down by the great criticist of Königsberg (to whose chair he was called in 1809), and once spoke of himself as a Kantian of the year 1828. He attacks its methods and its results, and reaches conclusions directly opposed to those of the reigning school on nearly every important point. We cannot, in his opinion, deduce reality from a principle: such principles come at the end and not at the beginning of philosophy. We cannot reduce being to one single ground, hence monism and pantheism are out of the question. Indeed, knowledge of the ultimate essence of things, that is, of things-in-themselves, is impossible: metaphysics, in the Hegelian sense, is a dream. Yet things-in-themselves exist, not one, but many; and the world is not merely our idea. Herbart opposes the rationalistic method, apriorism, monism, pantheism, subjective idealism, and free will, and substitutes for these doctrines empiricism, pluralism, realism, and determinism.

Realistic Ideal of Philosophy

Outside of experience, he tells us, there is no hope of progress in knowledge. It is the business of philosophy to begin with the general concepts of experience and of the sciences, with the thoughts which have been unconsciously evolved by the race. Such concepts we must examine with the help of formal logic, whose function it is to make their meaning clear and distinct, and to point out their inconsistencies, if such there be. Philosophy in general, therefore, consists in the elaboration of concepts: in analyzing them, comparing them, and attempting to harmonize them. Logic finds difficulties, inconsistencies, contradictions in what seem to be our simplest, clearest, and most distinct concepts, in such concepts as *thing, change, becoming, matter, self-consciousness:* all of them contain nests of contradictions. A thing, for example, in ordinary thought, is a complexus of qualities: gold is heavy, yet fusible; one thing is many things, a unity is a plurality. Herbart holds that nothing can be real that is contradictory, thus restoring the old-time logical principle of contradiction to its former place of honor in philosophy. Reality can be conceived only as an absolutely self-consistent system. In this sense our philosopher is, after all,

a rigorous rationalist: genuine knowledge is a system of self-consistent concepts. Hence, if our experience furnishes us with a world-view that is contradictory, it cannot stand. Here begins the work of metaphysics; the contradictions must be removed and harmonized; we must modify and correct our ordinary and scientific notions so that they will hang together, form a consistent picture of reality, render intelligible our world of experience.

This Herbart proceeds to do in his metaphysics. He accepts the Kantian teaching that experience reveals only phenomena; but, he insists, an appearance must always be the appearance of *something:* it implies a reality; *so viel Schein so viel Hindeutung auf Sein.* (Here, again, our Kantian thinker betrays his rationalism; basing himself on the notion of ground, he passes from ideas to things-in-themselves.) Our sensations cannot be explained, after the fashion of idealism, as mere products of the mind; subjective though they be, they suggest a being outside of them, a world of things-in-themselves. The question is, How is this world, the true reality, constituted?

Metaphysics

Our seeming, appearing, phenomenal world is a world of contradictions, a world of many qualities and changes. We say, for example, a thing has many qualities, and a thing changes its qualities. How can one thing be many things? How can one thing be white and hard and sweet and fragrant, and how can it be now one thing, now another? It cannot be, for that would be contradictory. Every thing is what it is, identical with itself, absolutely one: to give it several qualities or to ascribe change to it, would be a contradiction in terms. Every sensation points to a single reality or being. A thing is simple, changeless, constant being: absolute, indivisible, not extended in space or in time. It cannot be conceived as a continuum, otherwise it would not be simple and absolute. The principle of identity, in this sense, is for Herbart a basal law upon which he rears his theory of reality.

But if a thing is what it is, a simple, changeless substance, how do we account for the illusion of manifoldness and change? Why do the things we experience *appear* to have many qualities and to change? Metaphysics can explain this only on the

assumption that there are *many* simple unchangeable principles, or substances, or *reals,* as Herbart calls them. Each particular and *apparently* simple thing is really not a simple thing having many qualities, but a complexus or aggregate of *many* simple things or reals, in more or less constant union. We must assume many reals, because the so-called thing has many qualities; when such and such reals happen to form such and such combinations with one another, enter into such and such relations, then such and such phenomena result. Change is explained as the coming and going of reals; to say a thing changes its quality means simply: a change occurs in the relation of the reals or monads composing it; the reals themselves originally composing it are unchangeable, and every one of them remains unalterably what it is; only the relation has changed, reals have been added or taken away. It is for this reason that we can call phenomena "the accidental viewpoints" of things. One and the same line can be a radius or a tangent; in the same way a real may enter into different relations with other reals, without changing its essence. What we say of their mutual relations does not affect their being: it is merely an accidental viewpoint which we take.

The world of reals is absolute; there is no change, growth, appearance in it, everything is what it is. But we relate the thing with another thing, with another real or reals; the semblance is in us, the contradictions of plurality and change are phenomena in us; all qualities are secondary qualities. This view would ascribe all variety and change to us; the real world would be an absolutely static world in which nothing would happen; all occurrence would be a phenomenon in consciousness.

Nevertheless, there appears to be change in the real itself. This is explained as follows. Every real strives to preserve its identity against disturbances on the part of other reals. One and the same real will, therefore, behave differently in maintaining itself against others. There is no real change in the real; it asserts its quality, or preserves its essence, against all disturbance, but the way it preserves itself depends on the nature and degree of the disturbance threatening it. Even if there were no opposition, if it existed alone, it would preserve its

quality. The real maintains itself at the same level always; it is constant, unchanging in the face it presents, but it seems that varying degrees of effort are required for it to preserve its calm in the presence of different qualities and different degrees of opposition. The question arises, How is all this possible in view of the statement that reals do not influence one another? They do seem to influence one another; the presence of other reals does not change the nature or status of any real, but it does arouse different degrees of activity (self-preservation) in it.—Space, time, motion, and matter are treated according to the same method: they are not reals, but objective appearances of reals.

Psychology

Herbart's psychology is a part of metaphysics: it is rational psychology. Empirical psychology cannot be made the basis of philosophy; psychology presupposes metaphysics; without a metaphysical psychology the questions of a critique of reason cannot be answered, indeed not even thoroughly discussed. Psychology rests on experience, metaphysics, and mathematics. The soul is a simple, absolute, timeless and spaceless real (it is the first substance science compels us to presuppose); hence, it cannot have different faculties or powers, of which psychologists speak. Herbart's attack on the faculty-psychology results from his metaphysical presuppositions. Since the soul is a simple substance, there can be no action in it but self-preservation. It is related to the body, which is an aggregate of reals, the seat of the soul being in the brain. All souls are essentially alike; the differences in souls and in their development are due to external conditions, such as the organization of the body. The soul has originally no powers or capacities, neither ideas nor feelings nor impulses; it knows nothing of itself, has no forms, intuitions, or categories, no *a priori* laws of willing or acting. A sensation arises in the soul when the soul asserts itself against another real; sensation is the expression of its function of self-preservation. The entire content of the soul, as it exists in the developed state, is the result of the reproduction and association of sensations. Psychology is the statics and mechanics of the mind. Herbart's aim is to create a science parallel to physical mechanics. The old physics explained everything by forces, the new physics reduces every-

thing to motion; the old psychology explained everything by powers and faculties, the new psychology must explain everything by the movements of ideas: sensations and ideas tend to persist, but other psychic states contend with them; there is action and reaction. Herbart seeks to formulate mathematically the relations existing between them. Mental life, then, is explained as the complication, fusion, and opposition of ideas; feelings and strivings, or impulses, are modifications of ideas. Consciousness does not exhaust psychic life; processes occur beneath the threshold of consciousness, in the region of the unconscious. There is no free will; everything in the mind follows fixed laws, and psychical processes can be mathematically determined.

The permanent ground of mental life is the soul-substance, and not the so-called self-identical ego, the ego as knower, the self-conscious personality. Indeed, the notion of such a self-conscious subject is contradictory. How can that which is a subject also be an object, how can the ego represent, or be conscious of, itself? It is contradictory to say the knower is the thing known, the subject is the object. Besides, we can never become aware of the ego, because it always shifts its base when we try to catch it, and leaves us with an object (the *me*). The eye cannot see itself; the ego can see only its picture; an ego that is seen or looked at is no longer the looking or perceiving ego: this eternally eludes our grasp. The self-conscious ego is not a principle, but a product; it is not the spontaneous ground or center of our mental life, but itself the result of the mechanics of the soul. Self-consciousness comes later than the consciousness of objects, it presupposes many ego-ideas. Fichte's pure ego is an abstraction; the only kind of self-consciousness we know is our empirical self-consciousness, and this is always a consciousness of objects.

Characteristic of Herbart's psychology are his rejection of the faculty-theory, his theory of presentation (*Vorstellung*) as the sole and basal function of the soul, his doctrine of the unconscious, his theory of apperception, his associationism, his theory of interaction, his determinism, and his view that the ego is not a principle, but a product. Space, time, and the categories are not *a priori* forms of the mind, but products of the me-

chanics of the soul, the result of the interaction of psychic elements.

Metaphysics has to do with reality. There is a science called æsthetics, which deals not with realities, but with *values*,—which pronounces judgments of taste. These two sciences are absolutely separate, and Herbart opposes all attempts that have been made to unite them. There are, besides theoretical judgments, judgments which express approval and disapproval: we call things beautiful and ugly, praiseworthy and blamable. The problem of æsthetics is to examine the objects of these judgments and to discover what pleases or displeases us in them. Herbart finds that it is not their content, but their form, that our feelings of approval and disapproval are aroused by certain simple relations existing between things.

Science of Values

Practical philosophy is a branch of æsthetics and concerns itself with the morally beautiful. We approve and disapprove certain relations of will. Experience shows that there are five types of relations which give rise to ethical judgments and which are called patterns or Ideas. We approve the relation in which the individual's will agrees with his conviction (Idea of inner freedom); a harmonious relation between the different strivings of the will in the same subject (Idea of perfection); a relation in which a will makes the satisfaction of another's will its object (Idea of benevolence). We disapprove a relation in which several wills impede one another, that is, conflict and discord. We approve a relation in which each will permits a will to impede its own (Idea of justice). We disapprove a relation in which the intended good or evil act is not recompensed (Idea of retribution). Corresponding to these five Ideas, in inverse order, are five systems of society: the legal system, the wage system, the system of administration, the system of culture; all of which are united in the realization of the Idea of inner freedom as applied to society. The supreme ideal of society is the union of will and reason, one in which there is no discord between the members.

Herbart exercised his greatest influence through his theory of education. Pedagogy he regarded as applied psychology, and its ends as determined by ethics. His mechanical conception

of mental life as the result of the interplay of ideas accounts for the emphasis he places on instruction, the importance of interest, and the value of apperception.

F. H. Beneke (1798-1854; *Lehrbuch der Psychologie als Naturwissenschaft,* 1833, *System der praktischen Philosophie,* 1837) was influenced by Herbart, as well as by Fries and English empiricism. He agrees with Herbart that psychology must be based on experience, but rejects the view that makes it dependent on mathematics and metaphysics. It is the science of inner experience, the most certain of all our knowledge, and must serve as the foundation of metaphysics, epistemology, ethics, and pedagogy.

63. Philosophy of Will: Schopenhauer and Hartmann

Arthur Schopenhauer was born, 1788, in Danzig, his father being a wealthy banker and his mother a popular novelist of her day. The son entered business, but found commercial life distasteful and exchanged the counting-house for the university. At Göttingen (1809-1811) and Berlin (1811-1813), he devoted himself to the study of philosophy, natural science, and Sanscrit literature. His favorite philosophical writers were Plato and Kant; Fichte he heard at Berlin and was undoubtedly influenced by him, notwithstanding his contemptuous characterization of him, Schelling, and Hegel as the "windbags of philosophy." Schopenhauer established himself as a private docent at the University of Berlin and lectured there intermittently from 1820 to 1831 during the period of Hegel's greatest popularity, but met with little success as a teacher. In 1831 he retired from the University, full of bitterness and hatred of all "philosophy-professors," and settled at Frankfort on the Main, devoting himself to thinking and writing. His fame was slow in coming, but it sweetened the last few years of his life. He died in 1860.

Schopenhauer

Über die vierfache Wurzel des Satzes vom zureichenden Grunde, 1813; *Die Welt als Wille und Vorstellung,* 1819; *Über den Willen in der Natur,* 1836; *Die beiden Grundprobleme der Ethik,* 1841; *Parerga und Paralipomena,* 1851. Collected works ed. by Frauenstädt, 6 vols., 2d ed., 1877; by Grisebach, 1890, ff. (new ed. in *Reclam,* 6 vols.); by Steiner, 13 vols., 1894; by Deussen, 1911, ff. *Index* by Wagner.

Translations: *World as Will and Idea,* by Haldane and Kemp, 3 vols., 1884, ff.; *Fourfold Root* and *Will in Nature,* by Hillebrand, 2d ed., 1891; *Basis of Morality,* by Bullock; *Selected Essays,* by Bax.

Monographs by W. Wallace, Whittaker, Zimmern, Caldwell, Volkelt, K. Fischer, Ribot, Grisebach; Paulsen, *Schopenhauer, Hamlet, Mephistopheles;* Simmel, *Schopenhauer und Nietzsche;* Tsanoff, *Schopenhauer's Criticism of Kant;* Th. Lorenz, *Entwicklungsgeschichte der Metaphysik Schopenhauers.* Cf. Sully, *Pessimism.*

Schopenhauer accepts the thought of Kant's *Critique of Pure Reason* that the world of experience is a world of phenomena,

conditioned by the nature of human intelligence. The mind has its forms of perceiving (space and time) and its categories of knowing; the latter Schopenhauer reduces to the single category of causality. What the world is apart from intelligence, Kant had declared, we do not *know,* and can never know, in the sense in which we know phenomena; it is the great unknown, the noumenon of which the perceived world is the phenomenon. We do not come face to face with the thing-in-itself in an intellectual intuition and can, therefore, know nothing of it except that it exists; the forms of the mind, space, time, causality, and the rest are inapplicable to it.

The World as Will and Idea

At this point Schopenhauer's teaching diverges from that of his master. It is true, he says, if I were merely an *intellectual* being, an outward-looking subject, I should perceive nothing but phenomena arranged in space and time, and in causal relation. In my own innermost consciousness, however, I come face to face with my true, real, basal self; in the consciousness of activity I become aware of the thing-in-itself. The thing-in-itself is *will;* it is the primary, timeless, spaceless, uncaused activity that expresses itself in me as impulse, instinct, striving, craving, yearning. I also become aware of myself as a phenomenon, as a part of nature; I image myself as an extended organic body. I know myself in two ways: as will and as body; but it is the one will which, in self-consciousness, appears as the consciousness of activity and, in perception, as my material body. The will is my real self, the body the expression of the will.

This thought is the key to the solution of the whole question of metaphysics. All things are interpreted by Schopenhauer in analogy with his conception of the human being: the world is will and idea; idea to the intellect, but in reality will. We find this voluntaristic world-view corroborated by the facts. When I look inward, I come face to face with will; when I look outward, I perceive this will of mine as body. My will objectifies itself as body, expresses itself as a living organism. We are, therefore, justified in inferring by analogy that other bodies are, like mine, the outward manifestations of will. In the stone, will mani-

Will in Nature and in Man

fests itself as blind force; in man, it becomes conscious of itself. The magnetic needle always points to the north; bodies always fall in a vertical line; substances form crystals when acted on by other substances; and all such occurrences give evidence of the operation of forces in nature which are akin to the will in us. In the vegetable kingdom, too, we discover traces of unconscious striving or impulse. The tree desires light and strives upward; it also wants moisture and pushes its roots into the soil. Will or impulse guides the growth of the animal and directs all its activities. The wild beast desiring to devour prey develops teeth and claws and muscles; the will creates for itself an organism suitable to its needs; function precedes organization: the desire to butt is the cause of the appearance of the horns. The will to live is the basal principle of life.

In man and the higher animals this primitive impulse becomes conscious; it creates intelligence as its organ or instrument; intelligence is the lamp that illuminates the will's way through the world. The will makes for itself a brain; the brain is the seat of intelligence; intelligence and consciousness are functions of the brain: in this respect Schopenhauer agrees with the materialists. On the lower stages of existence, the will is blind craving, it works *blindly,* without consciousness; in man it becomes conscious; intelligence is grafted on the will and becomes the greatest of all instruments of self-preservation. But it always remains in the service of the will; will is the master, intellect the servant.

Will controls perception, memory, imagination, judgment, and reasoning; we perceive, remember, imagine what we will to perceive, remember, and imagine; and our arguments are always pleas of the will. As we pass downward in the scale of existence from man to the mineral, we observe intelligence falling into the background; the will, however, remains as the one, constant, persistent element. In the child and the savage, impulse predominates over intelligence; in the animal kingdom, instinct gradually becomes unconscious; in the plant, it is unconscious; in the mineral, all trace of intelligence disappears.

This basal will, which manifests itself in mineral and in man, is not a person, not an intelligent God. It is a blind unconscious force that wills existence. It is neither spatial nor tem-

poral, but expresses itself in individuals in space and time; that is, it acts in such a way that our mind perceives it in individual, *i.e.*, temporal and spatial, form. It manifests itself in eternal, immutable types, which Plato calls *Ideas*. The different organic species, for example, are eternal immutable types: the species do not change; the individuals belonging to the species grow and die, but the will-type or the species endures. These types form an ascending scale, a graduated series (Aristotle), rising from the lowest stages of matter to man. Individuals may come and individuals may go, but will goes on forever. Hence, the fundamental part of us, the will, is immortal; the particular, individual form in which it expresses itself is mortal. Suicide, therefore, means the destruction of a particular expression of the will, but not of the will itself.

The will to be, the will to live, is the cause of all struggle, sorrow, and evil in the world. A world of ceaseless striving and battle, in which the different forms of the blind will to exist struggle with one another, a world in which the little fishes are devoured by the larger ones, is not a good world, but an evil one, indeed the worst of all possible worlds (pessimism). The life of man is not worth living, because it is full of misery: it follows from the very nature of the human will that it should be full of pain and misery. Life consists of blind craving, which is painful so long as it is not satisfied, and which when satisfied is followed by new painful desires, and so on *ad nauseam*. We are never permanently satisfied, there is a worm in every flower. We are like shipwrecked mariners who struggle and struggle to save their wearied bodies from the terrible waves, only to be engulfed at last. "The life of most men is but a continuous struggle for existence,—a struggle which they are bound to lose at last. Every breath we draw is a protest against the death which is constantly threatening us, and against which we are battling every second. But Death must conquer after all, for we are his by birth, and he simply plays with his prey a little while longer before devouring it. We, however, take great pains to prolong our lives as far as we can, just as we blow soap-bubbles as long and as large as we can, though we know with absolute certainty that they must break at last."

Ethics of Pity

After one life has run down, the will repeats the same old process in new individuals. "The life of most men is weary yearning and torture, a dreamy tottering through the four ages toward death, accompanied by a succession of trivial thoughts. It is like a clock-work that is wound up and goes without knowing why; and every time a man is conceived and born, the clock of human life is wound up anew, in order to grind out the same old hackneyed tune which it has played so many countless times before, measure for measure, beat for beat, with insignificant variations."

Another reason why life is evil is because it is selfish and base; and it follows from the very nature of the will that it should be so. *L'homme est l'animal méchant,* a heartless and cowardly egoist, whom fear makes honest and vanity sociable, and the only way to succeed in the world is to be as grasping and dishonest as the rest. The progress of knowledge and civilization does not mend matters; it simply brings with it new needs and, with them, new sufferings and new forms of selfishness and immorality. The so-called virtues, love of labor, perseverance, temperance, frugality, are merely a refined egoism. "In much wisdom is much grief; and he that increaseth knowledge increaseth sorrow." "History is an interminable series of murders, robberies, intrigues, and lies; if you know one page of it, you know them all."

Schopenhauer teaches that sympathy, or pity, is the basis and standard of morality, and that the race is wicked because it is selfish. To be good, an act must be prompted by pure sympathy; if the motive is my own welfare, the act has no moral worth at all; if the motive is the harm of others, it is wicked. The empirical character of man is wholly determined, but the fact of remorse suggests that the will is free; my will must therefore be ultimately responsible for my character: the intelligible ego has fashioned the empirical ego.

Since the selfish will is the root of all evil and the source of all sorrow, man must negate the will, suppress his selfish desires, in order to enjoy happiness or at least to be at peace. This is possible in several ways. The artistic or philosophical genius may be delivered from the selfish will, forget himself, lose himself in artistic contemplation or philosophical thought,

a method that affords only temporary relief though it offers a foretaste of deliverance. The individual can also free himself from his selfish will by contemplating the wickedness of the world, the futility of all desire, and the illusoriness of individual existence. If he will think of these things and remember that all individuals are one in essence, that they are all manifestations of the same primal will, he will feel sympathy or pity with all creation; he will see himself in others and feel the sorrows of others as his own. This is the moral way, but it likewise furnishes only temporary relief. The best way is total negation of the will in an ascetic life, such as is practised by Christian ascetics and Buddhist saints. Resignation and willlessness ensue, the will is dead. The saint finds deliverance from his own will, from the impulses which bind the natural man to the world; the will dies as soon as it becomes aware of what it is, through the knowledge of life, the road to which is suffering.

Philosophy of the Unconscious

Influenced by Schelling, Hegel, and Schopenhauer, E. von Hartmann (1842-1906) seeks to reconcile Hegel's intellectualism with the voluntarism of Schopenhauer, basing his speculation on the inductive-scientific method and offering a philosophy of nature resembling Schelling's. Mechanism is inadequate as an explanation and must be supplemented by an idealistic conception. We cannot account for the facts without assuming the operation of a will in nature, and this will must be conceived as determined by an idea of purpose, which, however, is unconscious. Animal instinct, for example, is intelligent action towards an end without consciousness of that end. It is not determined by mechanical or psychical conditions, but adapts itself to the environment, transforming its organs to meet its needs. The directing principle in things, matter included, is an unconscious, impersonal, but intelligent, will,—that is, idea plus will,—which becomes fully conscious only in the brain of man. Matter consists of centers of force, or unconscious will-impulses, which represent the activities of an absolute universal unconscious spirit. This absolute spirit was originally in a state of inactivity, mere potential will or reason, but it was impelled to action by the

groundless will. It is due to the logical reason in it that the unconscious world-will is governed by rational purposes, and that it expresses itself in a rational process of evolution. But all willing is essentially evil and the cause of unhappiness. The final purpose of this process is the deliverance of the absolute will from itself and the return to the original state of rest, the *nirvana*. This end will be attained when the human race decides upon non-existence. In the meanwhile, it is our duty to affirm the will to live to the utmost, not to practise asceticism and world-flight.

Philosophie des Unbewussten, 1869 (transl. by Coupland); *Phänomenologie des sittlichen Bewusstseins,* 1879; *Grundproblem der Erkenntnistheorie,* 1890; *Religionsphilosophie,* 1881, f.; *Kategorienlehre,* 1896; *System der Philosophie im Grundriss,* 1907, ff.

Sully, *Pessimism,* chap. v; A. Drews, *Hartmanns philosophisches System;* O. Braun, *E. v. Hartmann;* Vaihinger, *Hartmann, Dühring und Lange.*

64. NEOKANTIANISM

Kant had sought to establish the validity of mathematics and natural science against the skepticism of Hume, but had denied the possibility of metaphysics as an *a priori* science of things-in-themselves. Rational theology, cosmology, and psychology have no scientific value for him: we cannot prove the existence of God, the immortality of the soul, and the freedom of the will to theoretical reason; theoretical knowledge is out of the question here, because these things are not and cannot be objects of experience. We can form metaphysical hypotheses, it is true, having more or less probability, but universal and necessary knowledge cannot be reached in them. We may, however, rise to a higher kind of knowledge of freedom, immortality, and God, through a moral intuition, as it were: practical reason assures us of the validity of such truths, though we cannot give them a sensuous content and hence know them in the *scientific* sense.

Reaction against Speculative Philosophy

As we have seen, the great successors of Kant,—Fichte, Schelling, Hegel,—did not share his misgivings with respect to metaphysics. Hegel offered a logical explanation of the universe in all its various phases, and his philosophy remained the reign-

ing one in Germany until 1840. The critical opposition to rationalistic metaphysics, however, persisted outside of the post-Kantian school; we find it expressed in the writings of Fries, Beneke, Herbart, Schopenhauer, and many others. Objections were also made to the claim that philosophy possesses a special method of knowledge in the artistic intuition of Schelling or in the dialectical process of Hegel; and the treatment of scientific research as a mere preparation for philosophy, or even as a false method, was repudiated. Speculative philosophy was accused of ignoring the facts or of attempting to spin them out of its own inner consciousness, and fell into disrepute. The progress of natural science invited a closer study of experience and led to positivism and to a growing contempt of metaphysics, which came to be identified with the speculations of the post-Kantians. In 1842 Robert Mayer discovered the principle of the conservation of energy; in 1859 Darwin published his epoch-making work on the *Origin of Species by Means of Natural Selection.* The eclipse of philosophy and the triumph of natural science encouraged the growth of materialism. In the fifties began the *Materialismusstreit* in Germany, in which Karl Vogt (1817-1895), H. Czolbe (1819-1873), J. Moleschott (1822-1893), and L. Büchner (1824-1899; *Force and Matter,* 1855) led the forces against the idealistic systems. The movement was as much a protest against the theological reactionaries as against the extravagances of speculative philosophy, and combined with its materialistic metaphysics a humanitarian and idealistic ethics. Indeed, the theories offered were, as a rule, not consistent materialistic theories at all, but conglomerations of many views: thought being conceived sometimes as motion, sometimes as the effect of motion, sometimes as the necessary concomitant of motion, sometimes as one of the aspects of an underlying unknown principle of which motion is a parallel expression. Büchner's book had a great vogue, from the fifties on, and passed through at least twenty editions. Its place has now been taken by Ernst Haeckel's *Riddle of the Universe* (1899), a work that shows the same inconsistencies as its predecessor.*

* See Thilly, *The World-View of a Scientist: Ernst Haeckel's Philosophy, Popular Science Monthly,* September, 1902.

The chemist Wilhelm Ostwald (1853—; *Die Überwindung des wissenschaftlichen Materialismus,* 1895, *Naturphilosophie,* 1902) rejects materialism and mechanism in favor of a dynamic or "energetic" theory. The various properties of matter are special forms of energy (kinetic, thermal, chemical, magnetic, electric, etc.), which cannot be reduced to one another. Psychic energy is another form of energy; it is unconscious or conscious *nervous* energy. Interaction is explained as the transition from unconscious to conscious energy or the reverse.

Under these circumstances, it was natural that philosophers should again take up the problem of knowledge, to which Kant had given such careful and sober attention, and subject the various intellectual tendencies of the age to critical examination. The critical philosophy became the rallying-point for all those who opposed both the methods of the Hegelians and the progress of materialism, as well as for those who distrusted metaphysics altogether. In 1865 O. Liebmann raised the cry: Back to Kant (*Kant und die Epigonen*), in which he was joined by Weisse, Zeller, Fortlage, Haym, and K. Fischer; and F. A. Lange published his celebrated work on *History of Materialism.* During recent years, this Neokantian movement has grown to large proportions, and nearly every German thinker of note may be said to belong to it, in some way or other. All the members of this group emphasize the need of epistemological investigations, some even regarding the philological study of the Kantian writings, especially of the *Critique of Pure Reason,* as of primary importance (Vaihinger, B. Erdmann, Reicke, Kehrbach, Adickes, E. Arnold). Certain Neokantians would limit philosophy to epistemology, accepting the positivistic conclusion that we can know phenomena only and rejecting all metaphysics, whether materialistic or idealistic, as beyond our ken. According to Lange (1828-1875), who has exerted a great influence, materialism is justified as a method, but not as a world-view, since it fails to explain the basal nature of physical objects and of our own inner self. To his mind, metaphysical and religious speculations are the products of a kind of "constructive instinct" in man and have no theoretical value: the existence of an ideal world cannot be proved, but such a conception has practical worth in human life. H. Cohen (born 1842), the head of the Marburg School, develops the critical philosophy and offers a system of his own

Revival of Criticism

(*System der Philosophie,* 1902, ff.), on the basis of Kant's method. Among his pupils are P. Natorp (*Sozialpädagogik,* 1899) and R. Stammler (*Lehre von dem richtigen Rechte,* 1902).

Immanent Philosophy

Another group of thinkers, influenced by Berkeley and Hume, as well as by Kant, limit philosophy to the analysis of states of consciousness. Their doctrine has been called the *immanent* philosophy; the school is represented by Schuppe, Rehmke, and Schubert-Soldern. Some of the members end in solipsism, but the larger number of them advocate an objective idealism, setting up a universal consciousness as a necessary presupposition of knowledge.

The theological Neokantians place the emphasis on Kant's ethical philosophy: a rational moral faith, ethical-religious experience, forms the basis of religion. To this group belong A. Ritschl and his followers: W. Hermann, J. Kaftan, H. Schultz, K. Köstlin, A. Dorner, and R. Lipsius.

65. New Idealism

Metaphysics and Natural Science

With the decline of Hegelianism came the reign of natural science and materialism, and the temporary eclipse of all philosophy. No one could hope to reëstablish it in a position of respect who did not understand and appreciate the methods and results of natural science as well as those of philosophy. A number of thinkers arose in Germany, some from the ranks of natural science itself, through whose efforts philosophy has regained a place of honor in the hierarchy of the sciences. Most prominent in this group are Lotze, Fechner, Hartmann, Wundt, and Paulsen. All these men have profited by a study of the different movements of thought: positivism, materialism, criticism, and post-Kantian idealism. They regard as futile any attempt to construct a metaphysics by means of the rationalistic methods of the old schools and independently of natural science. Though rejecting subjective idealism and the *a priori* and dialectical methods, they may all be called descendants of German idealism. With Kant's *Critique of Pure Reason,* they hold that there can be no knowledge in science and philosophy without experience;

with positivism, that there can be no system of metaphysics possessing absolute certainty.

A thinker well fitted by training and temperament to undertake the task of reëstablishing philosophy was Hermann Lotze, who offered a system, combining the monadology of Leibniz with the pantheism of Spinoza, which sought to reconcile monism and pluralism, mechanism and teleology, realism and idealism, pantheism and theism, and which he called teleological idealism. His aim was to do justice to the claims of an ethical-religious idealism (Fichte) as well as to the sober scientific interpretation of natural phenomena.

Hermann Lotze

Lotze (1817-1881) studied medicine and philosophy at Leipzig, became a teacher of physiology and philosophy in that university (1839), and professor of philosophy at Göttingen (1844), where he remained until 1881, when he was called to Berlin.

Works: *Metaphysik,* 1841; *Allgemeine Pathologie und Therapeutik als mechanische Naturwissenschaften,* 1842; *Logik,* 1843; *Physiologie,* 1851; *Medizinische Psychologie,* 1852; *Microcosmus,* 3 vols., 1856-1864; *System der Philosophie: Logik,* 1874, *Metaphysik,* 1879.

Microcosmus, transl. by Hamilton and Jones, 1884; *Logic,* by B. Bosanquet, 2 vols., 1884; *Metaphysics,* by B. Bosanquet, 2 vols., 1884; *Lotze's Outlines* (lectures), by Ladd. On Lotze, see H. Jones, *The Philosophy of Lotze;* Hartmann, *Lotzes Philosophie;* Falckenberg, *Lotze;* E. Pfleiderer, *Lotzes philosophische Weltanschauung;* V. Robins, *Some Problems of Lotze's Theory of Knowledge;* V. Moore, *Ethical Aspect of Lotze's Metaphysics;* Lichtenstein, *Lotze und Wundt;* M. Wentscher, *Lotze.*

Man is not a mere mirror of facts; he cannot find satisfaction for his ethical and religious interests in a mechanized universe. And yet the physical world, life included, is to be explained by physical and chemical laws, on the basis of a mechanical atomism. Organic matter differs from inorganic matter, not in the possession of vital force, but only in the different arrangement of its parts; and this arrangement is a system of physical reactions that determines the direction, form, and evolution of every one of the parts. The living body is an automaton,—more of a machine than any invention of man. This view seems to leave no place for man and his purposes and ideals; and yet an examination of the presuppositions on which the mechanical theory rests

Mechanism and Teleology

will show that this is not the case. The external world, as presented to perception, is not a copy of reality, as naïve realism assumes, but a reaction of our own consciousness to external stimuli: a creation of the soul in the soul itself. The spatial-temporal sense-world is a phenomenal world, a product of consciousness. Sensation, perception, and the logical laws by which we interpret the given sensations, are functions of the subject. What, then, is the essence of the real things outside, of the things-in-themselves? This question we can answer only by analogical reasoning, and such reasoning will bring us to a metaphysical idealism. Things-in-themselves must have the capacity to act and to be acted on, or to suffer change, and yet remain the same in all change. A being of such nature we know immediately only in ourselves: it is the self-determining principle of unity called the soul. This unity of consciousness, the capacity of the mind to combine manifold phenomena in the unity of consciousness, is what compels us to assume the existence of an indivisible, supersensible soul, as a being distinct from the body. Only in the soul do we find unity in variety, persistence in change, and development: what has been experienced is not lost, but carried over into the present as part and parcel of our mental life. The real universe must, therefore, be interpreted in terms of mind, in terms of the only reality directly known to us. The atoms of which science speaks are immaterial essences, like Leibniz's monads, or centers of force, analogous to what we experience in our own inner life. Space is not a metaphysical reality, but a mere sensible appearance of the existence of these dynamic units, a constant product of perception. Even the lowest forms of matter are not dead, inert masses, but finely organized systems, full of life and action. There are various degrees of reality: the human mind represents the highest, self-conscious, stage in the scale of mental life, but mental life is equally present in less clearly conscious modes of existence, even in gross forms of matter.

Lotze also bases the acceptance of metaphysical idealism on practical or ethical grounds. It is an intolerable thought to suppose that a cold material atomic mechanism should exist for the sole purpose of picturing, in the feeling soul, a beautiful illusion of colors and sounds. Such a universe would have neither

meaning nor ethical worth. We can interpret reality only as something which we can absolutely approve, as something absolutely good; hence the phenomenal world cannot be a meaningless illusion, but must be conceived as the manifestation of an ethically ordered spiritual world. Lotze's logic and metaphysics are here rooted in ethics. We cannot think of anything existing that ought not to exist; our forms of thinking (the logical laws) are rooted in the demand for the good, and reality itself is rooted in what is absolutely good, in the highest good.

The relation of soul and body is one of interaction. *How* it is possible for the body to cause changes in the soul, or vice versa, cannot be explained, but the difficulty is no greater here than anywhere else. All we can mean by any causal action, is that on the occasion of a change in one object, a change takes place in another: *how,* we cannot tell. The principle of the conservation of energy is no argument against the interaction of mind and body: this is made possible by the fact that the body is not different from the soul in essence. The body is, for Lotze as for Leibniz, a system of monads or spiritual forces, the soul being situated in the brain and coming into relation with the body only in the brain. The soul dominates the body, so long as the body is alive; what becomes of it after the dissolution of the body is a riddle, but Lotze holds, as an act of faith, that every being will receive his just due at some time.

We see how the mechanistic theory is transformed in Lotze's thought into a system of spiritual realities in reciprocal relation with one another. Such a pluralistic world cannot be thought without a unifying, universal substance, of which all phenomena are the modes or expressions. Even the mechanical world-view, assuming, as it does, the harmonious interrelation of the movement of the smallest atom with the motions of all the other atoms in the world, makes necessary the conception of such an infinite being; indeed, the mechanism of nature is the expression of the absolute will, it is the way in which the Absolute gives itself external finite form. We cannot understand a single case of interaction or even causal efficiency, the possibility of the influence of one thing on another, unless we regard the manifold processes of nature as states of one and the same all-comprehending substance. Here Lotze's philosophy

Pantheism

develops into an idealistic pantheism, uniting Leibnizian and Spinozistic elements. The human soul is compelled to interpret the universal substance in terms of the highest reality that it knows,—as a personality; and we must think this divine personality as an absolutely good being, as a God of love.

Gustav Theodor Fechner (1801-1887), professor of physics at Leipzig, and one of the founders of psycho-physics, is a representative of the same movement.

Leben nach dem Tode, 1836; *Das höchste Gut,* 1846; *Nanna, oder Seelenleben der Pflanzen,* 1848; *Zend-Avesta,* 1851; *Über die Seelenfrage,* 1861; *Elemente der Psychophysik,* 1860; *Vorschule der Aesthetik,* 1876. On Fechner, see: Lasswitz, *Fechner;* Wundt, *Fechner;* Pastor, *Fechner.*

Fechner

Fechner reasons by analogy from the existence of mental processes in ourselves and their manifestation in our bodies, to the existence of psychic life, in descending degrees of clearness, in animals, plants, and finally also in inorganic matter, the atoms of which are centers of force. The entire universe is alive (*panpsychism*). There are also higher forms of psychic life than man's; the earth and the other planets have souls, and these, together with all psychic existences, are comprehended in a highest soul, a world-soul, the soul of God. The relation of God to the universe is analogous to that of the human soul to the human body; nature is the body of God, the objective expression of the world-soul, which is above nature, as the human soul is above the human body.

Friedrich Paulsen (1846-1908), in his *Introduction to Philosophy,* a book widely read in both Germany and America, offers an idealistic world-view similar to that of Lotze and Fechner. (Cf. Thilly, *Paulsen's Ethical Work, I. J. Ethics,* XIX, 2.)

Wundt

Wilhelm Wundt (born 1832), whose writings show the influence of the teachings of Spinoza, German idealism, Herbart, Fechner, Lotze, and the modern theory of evolution, first held a professorship of physiology at Heidelberg (1864-1873). In 1873 he became professor of philosophy at Zurich, and was called to Leipzig in 1875. He is the father of modern experimental psychology; many of the teach-

ers of this new science in the different parts of the world have been his pupils.

Lehrbuch der Physiologie, 1864; *Lectures on Human and Animal Psychology,* 1863 (transl. by Creighton and Titchener), 5th ed., 1911; *Physiological Psychology,* 1874, 6th ed., 1908-1911; *Introduction to Psychology,* transl. by Pinter, 1912; *Logik,* 3 vols., 1880-1883, 3d ed., 1906-1908; *Ethics,* 1886 (transl. by Titchener, Washburn, and Gulliver), 4th ed., 1912; *System der Philosophie,* 3d ed., 1907; *Einleitung in die Philosophie,* 5th ed., 1909; *Völkerpsychologie,* 5 vols., 1900, ff.

König, *Wundt als Psycholog und als Philosoph;* Eisler, *Wundts Philosophie und Psychologie;* Conrad, *Die Ethik Wundts;* Höffding, *Moderne Philosophen.*

Wundt defines philosophy as the universal science whose function it is to combine the general truths obtained in the special sciences into a self-consistent system. The facts of consciousness form the basis of all our knowledge; so-called external experience, the perception of an external world, is a phase of inner experience; all our experiences are mental. But this cannot be interpreted, in the sense of subjective idealism, as meaning that the world is a mere reflection of consciousness; we are compelled to infer the existence of an external world (critical realism). Space and time, causality and substance, notions which originate in the mind, would never arise in us without the coöperation of the objective world. A knowledge of nature would be impossible without both external causes and conceptual forms. If we make our external experiences the basis of our world-view, we are driven to an atomistic materialism; if we limit ourselves to the facts of our mental life, we shall end in idealism. We cannot, however, interpret the external world as devoid of inner life: the cosmic mechanism is the outer husk behind which lies concealed a spiritual creation, a striving and feeling reality resembling that which we experience in ourselves. The psychic element is given the priority, in accordance with the results of the theory of knowledge, for which inner experience must remain the original datum. Psychology shows that mental life is essentially activity, will: this manifests itself in attention, apperception, association, in the emotions and in volitions, and constitutes the central factor of mind (voluntarism).

The soul is not to be regarded as substance,—which would be a materialistic conception,—but as pure spiritual activity,

actus purus. Reality must be conceived as a totality of striving, willing beings, manifesting themselves in material form: it is composed of independent beings determined by inner purposes (teleology). We are led by ethical reasons to comprehend these individual wills in a universal absolute will, the nature of which we cannot further define. The world is the evolution of a mind, a progressive development of interrelated purposive forms.

Philosophy of Value

Some of the systems of philosophy we have examined are based on judgments of value; they interpret reality in terms of a highest good: the world must be, at bottom, what the ethical, æsthetic, or logical consciousness demands as the ideal. For Kant the universe is essentially what the moral consciousness implies,—what ought to be: the noumenal world must be a spiritual realm, a kingdom of ends, a free rational community in which each person wills the union. Fichte's world-view is similar to this, and Lotze, too, is guided in his thought by the conception of the good: we cannot conceive the world otherwise than based on a good principle. The introduction of such conceptions into metaphysics is said by many to rob it of its scientific character. Philosophy, they hold, is a work of the theoretical intellect; its business is to offer an explanation of reality free from the demands of man's moral or æsthetic or religious nature. The universe should not be conceived in terms of what we desire, in terms of what ought to be, but in terms of what is. Against this scientific and rationalistic view, it is pointed out by the value-philosophers that the desire for truth and rationality, the demand for logical consistency and unity, is itself a craving for what ought to be; that here, too, we are moved by an ideal: it offends our love of order and harmony, our ideal of perfection, or our longing for beauty to conceive reality as a chaos. Hence, it is argued, the logical impulse has not the primacy over the other demands of our nature, and no philosophical system can be adequate that fails to do justice to them all.

W. Windelband (born 1848; *Präludien,* 3d ed., 1907, *Geschichte und Naturwissenschaft,* 3d ed., 1904, *Willensfreiheit,* 2d ed., 1905, *Wille zur Wahrheit,* 1909), who has been influenced

by Kant and Fichte, works out this teaching in the spirit of the critical philosophy. According to him, philosophy is the science of universal values, the study of the principles of absolute value-judgments (logical, ethical, æsthetic); the subject-matter of all other sciences being theoretical judgments. There is a fundamental difference between the propositions: This thing is white, and, This thing is good. In the one case we predicate a quality belonging to the presented objective content; in the other, a relation pointing to a consciousness that sets up a purpose. The validity of logical axioms, moral laws, and æsthetic rules cannot be proved; the truth of each rests upon a purpose that must be presupposed as the ideal of our thinking, feeling, or willing. That is, if you desire truth, you must recognize the validity of the principles of thought; if you are convinced that there is an absolute standard of right and wrong, you must recognize the validity of certain moral norms; if beauty is to be something more than subjective satisfaction, you must recognize a universal norm for it. All such axioms are norms whose validity is based on the presupposition that thought aims to realize the purpose to be true; the will, the purpose to be good; and feeling, the purpose to apprehend beauty,—in such a way as to be universally acceptable. Faith in universal purposes is the presupposition of the critical method; without it, the critical philosophy can mean nothing.

Logical rules are, therefore, necessary instruments of the will for truth. This, however, is not to be understood in the pragmatic sense that their utility is their truth; truth is not derived from the will but from the things themselves, and is not an arbitrary affair. Windelband distinguishes between natural sciences and the sciences of events: the former deal with the constant, the abstract, the universal, with law; they are "nomothetic;" the latter (history) deal with the individual, the concrete, the unique, the novel, and are "idiographic."

To be mentioned in the same connection are the writings of H. Rickert (*Grenzen der naturwiss. Begriffsbildung,* 2d ed., 1913; *Kulturwissenschaft und Naturwissenschaft,* 2d ed., 1910), and H. Münsterberg (*Psychology and Life,* 1899, *Eternal Life,* 1905, *Science and Idealism,* 1906, *Eternal Values,* 1909). W. Dilthey emphasizes the uniqueness of the mental sciences (*Introduction to the Mental Sciences,* 1883), as distinguished from the natural sciences. We must study the relations,

methods, and presuppositions of the *mental* sciences; in them we gain a knowledge of reality, values, norms, and purposes, by reflecting on the expressions of the mind in history and psychology. Metaphysics, however, as a logical system of reality, values, and purposes is impossible. The mental sciences are based on a teleological, descriptive-analytical psychology, which is general psychology, comparative psychology, social-historical psychology.

Rudolf Eucken (born 1846) offers a system of metaphysics that seeks to do justice to human values, as well as to the logical intellect, and has succeeded in arousing an interest in ethical idealism outside of academic circles and in many lands.

Geistige Strömungen der Gegenwart, 1909 (transl. by Booth, under the title *Main Currents of Modern Thought*), first appeared 1878, under the title *Geschichte und Kritik der Grundbegriffe der Gegenwart; Die Lebensanschauungen der grossen Denker,* 1890, transl. by Hough and Boyce Gibson, under the title, *Problem of Life; Der Kampf um einen geistigen Lebensinhalt,* 1896; *Der Sinn und Werth des Lebens,* 1907, transl. by Boyce Gibson, under the title: *Value and Meaning of Life; Grundlinien einer neuen Lebensanschauung,* 1907, transl. by Widgery, under the title: *Life's Basis and Life's Ideal; Einführung in eine Philosophie des Geisteslebens,* 1908, transl. by Pogson, under the title: *The Life of the Spirit; Ethics and Modern Thought,* 1913. On Eucken see Boyce Gibson, *Eucken's Philosophy of Life;* Booth, *Eucken: His Philosophy and Influence;* Siebert, *Eucken's Welt- und Lebensanschauung;* A. J. Jones, *Eucken: A Philosophy of Life.*

Eucken

According to Eucken, neither naturalism nor intellectualism can fully interpret reality; the former always tacitly presupposes the mental world which its principles deny, while the latter can never make experience square with logical thought. The mind with its yearning for the infinite, revealing itself in ourselves and in history, points to a universal spiritual process, an independent and intelligible world beyond, as the source of all individual mental life. We experience such a free, self-active spirit in ourselves: it is an axiomatic fact or act which we cannot deduce, but only apprehend in its immediacy. In his essence man transcends history; he is a historical being only in so far as he is imperfect and strives for perfection. Either the spiritual life is an epiphenomenon of material nature or it is a self-existent totality, a universal whole, the source of all being. If human life is a mere incident in nature, then it is nugatory; all that is noblest

and best in it is a mere illusion, and the universe irrational. What religion is struggling for, is not the happiness of man, but the preservation of a genuine spiritual life on a human basis. The sharp contrast between the spiritual endowment in man and his real situation inspires him with the deep conviction that a higher power is active in him. The yearning for truth and love, the longing to live a genuine life instead of drifting with the current of mere phenomena, we cannot uproot from the human heart. The ceaseless striving in man, the impulse for self-activity, immediacy, and infinity would be inconceivable without the operation in him of an infinite power. If there is no transcendent world, the spiritual life falls to pieces and loses its inner truth. An idealistic pantheism rises out of the desire for a higher world.

The universal life forms the ground of all being,—of human history, of human consciousness, and of nature itself. The universal process evolves from the inorganic to the organic, from nature to mind, from mere natural soul-life to spiritual life; and in this process of evolution towards independence and self-realization the world becomes conscious of itself. Human personality is not, however, submerged in this universal mind; indeed, the development of individuality is possible only within, and as sharing in, the universal life.

PHILOSOPHY IN FRANCE AND ENGLAND

66. Positivism and Its Opponents in France

In France, the Enlightenment, which rested on a naturalistic philosophy, brought in the great revolution with its disturbing social and political changes. After the revolution, the sensationalistic and materialistic theories (Condillac, the Encyclopedists, Holbach), which had been so popular during the last half of the eighteenth century, lost their vogue, and new philosophies came to the front. It was not strange that an excess of criticism and liberalism should have aroused a conservative reaction, and that the demand for free thought should have been opposed by a school of thinkers who emphasized the principle of authority and

Reaction against Sensationalism

offered a supernaturalistic philosophy as a remedy to the troubled age. Thus, Joseph de Maistre (1754-1821) declared that human reason had shown itself impotent in governing man, and that faith, authority, tradition alone could hold him in check and bring about a stable order of society. Psychology, however, seemed to offer the best arguments against materialism and became the most promising field of study. Condillac's sensationalism had proved unsatisfactory even to members of his school. The materialist Cabanis called attention to vital feelings and instinctive reactions, elements of conscious life which it was difficult to explain as mere products of external senses. Maine de Biran (1766-1824), who began as a follower of Condillac and Cabanis, finds in the feeling of effort the central element of consciousness and the basal principle of knowledge: in this inner experience, he thinks, we become directly aware of the activity of the soul as well as of the existence of a material world. The feeling of effort is also the basis of our notions of force, causality, unity, identity, and so forth.

The most important opposition to materialism, however, came from Royer-Collard (1763-1845), Victor Cousin (1792-1867), and T. Jouffroy (1796-1842). Royer-Collard, an eloquent teacher of philosophy at the Sorbonne, accepted the common-sense philosophy of Thomas Reid. Cousin offered an eclectic system with a spiritualistic keynote, which showed the influence of Reid, Collard, Biran, Schelling, and Hegel, and became a leading force in French education.

On French philosophy of the first half of the nineteenth century, see Lévy-Bruhl, *History of Modern Philosophy in France;* Morell, *Speculative Philosophy of Europe in the Nineteenth Century,* 2d ed., 1847; Flint, *Philosophy of History in France;* Damiron, *Histoire de la philosophie en France au XIXe siècle,* 3d ed., 1834; works by Taine, Ravaisson, Ferraz; Ueberweg-Heinze, *op. cit.,* Part III, vol. II, §§ 35-40. Bibliography in Ueberweg-Heinze, *op. cit.*

Not one of these movements, however, possessed sufficient vigor to satisfy the needs of an age that still felt an interest in the ideals of liberty, equality, and fraternity. The reform of human society remained the dream of a large part of French thinkers, and practical questions appealed to them more strongly than the theories of eclectic phi-

Saint-Simon

losophers. The political revolution had not brought universal happiness, it is true; the ignorance and misery of the lower classes had not been removed by the proclamation of universal human rights. It was now held that the goal could be reached by social evolution, through the gradual reform of society by education and enlightenment. Claude Henri de Saint-Simon (1760-1825) conceived the idea of a new science of society which would do away with the unequal distribution of property, power, culture, and happiness. The main thing, according to him, was the economic and intellectual emancipation of the workers; the form of government he regarded as immaterial. A new Christianity is needed, he declared, which shall preach not self-denial, but love of the world, and emphasize the command of love, which for Saint-Simon meant love of the poor and lowly. The reform of society presupposes a knowledge of social laws and, therefore, implies a reform of the sciences as well as of our world-view. The present, he holds, is a period of criticism, negation, and dissolution, an age of spiritual chaos, a critical and not an organic age. The medieval age was an age of construction, an age of spiritual and social organization, an organic age, and to such a period we must again return. We need a new system of thought, and this must be a *positive philosophy:* a system based on experience and science.

Saint-Simon, a sympathetic seer and enthusiast rather than a systematic thinker, was not the man to construct the positive philosophy. The task was undertaken by Auguste Comte, who had been commissioned by Saint-Simon to write for his *Catéchisme des industriels* (1823-1824) the part dealing with the scientific system of education; but the account did not seem to the master to do justice to the emotional and religious phase of education. Comte was born, 1798, in Montpellier, the son of an orthodox Catholic family. He attended the polytechnical school at Paris (1814-1816), where he acquired a knowledge of the exact sciences and imbibed the principles of Saint-Simonism, which had an enthusiastic following in that institution. After leaving the school, he studied biology and history and gave lessons in mathematics in order to gain his livelihood. He became associated with Saint-Simon for a number of years, but the men did not agree, and Comte began to work out his own ideas independently of the master, supporting himself, as best he could, by means of his pen and by giving private instruction. Although he made several attempts to obtain a professorship, he never succeeded. He died in 1857.

Comte

Plan des travaux scientifiques nécessaires pour réorganiser la société,

1822; *Politique positive,* 1824; *Cours de philosophie positive,* 6 vols., 1830-1842 (abridged transl. by H. Martineau); *Système de la politique positive, ou traité de sociologie instituant la religion de l'humanité,* 4 vols., 1851-1854 (contains *Plan;* transl.); *Catéchisme positiviste, ou sommaire exposition de la religion universelle,* 1853 (transl. by Congreve). Letters of Comte to Valet, 1877, and Mill, 1877.

J. S. Mill, *Comte and Positivism;* E. Caird, *Social Philosophy and Religion of Comte;* Watson, *Comte, Mill, and Spencer;* Whittaker, *Comte and Mill;* Littré, *Comte et la philosophie positiviste;* Lévy-Bruhl, *La philosophie d'A. Comte;* Duherme, *Comte et son œuvre;* Dupuy, *Le positivisme de Comte;* Defourny, *La sociologie positiviste.*

As the titles of his books indicate, Comte's ideal is, like that of Saint-Simon, the reform of society. This end cannot be reached until we have a knowledge of the laws of society, a social science, which, in turn, presupposes all the other sciences and a philosophical point of view. The reform of society, therefore, calls for the reform of political and social science and philosophy,—a new philosophy, to the working out of which our author devoted his entire life. The Middle Ages had their world-view,—a common conception of the universe and of life,—in their theology, which, however, represented a primitive stage of thought. The remarkable development of the natural sciences in modern times, especially in France, suggested the scientific method as the one to be followed in the new undertaking. The sole object of science is to discover natural laws or the constant relations existing between facts, and this can be done only by observation and experience. Knowledge thus acquired is *positive* knowledge; and only such knowledge can be successfully applied, in the various fields of human practice, as is verified by positive science. Wherever we have not yet reached such knowledge, it is our business to obtain it by imitating the methods employed in the advanced natural sciences. We see, Comte here sides with the thinkers of the empirical school; he belongs to the chain of philosophers in which Hume and Diderot are important links.

Reform of Society and the Sciences

Positive knowledge, which is Comte's ideal, is the result of historical evolution. The human mind passes through three stages (the law of the three stages) or employs three methods of philosophizing: the theological, the metaphysical, and the positive, each of which has its practical value and its correspond-

ing social institutions. On the theological stage, the age of childhood, man regards things anthropomorphically, as the expressions of supernatural beings, passing from fetichism through polytheism to monotheism. This is the age of monarchy and absolute authority, and has priests as its leaders. On the metaphysical stage, the age of youth, abstract powers or entities are substituted for personal beings; such powers or essences are supposed to inhere in the different things and to be the necessary causes of the phenomena observed in the things; from the knowledge of these causes, the knowledge of their effects is said to be deduced. At first, different powers are assumed to explain different groups of phenomena,—such as chemical force, vital force, mental force,—but the tendency is to reach a single primary force, as on the preceding stage. The metaphysical age is the age of nationalism and popular sovereignty; jurists are its leading spirits. Both theology and metaphysics believe in the possibility of absolute knowledge and of explaining the innermost essence of things. On the stage of positivism, the attempt to discover the inner essences of things is abandoned as futile and replaced by the effort to discover the uniform relations existing between phenomena. The question asked is not Why? but How? Laws of nature are substituted for absolute causes; the aim now is to ascertain invariable relations between facts by the method of observation. Galileo, Kepler, and Newton have established the positive sciences. We cannot know what heat, light, and electricity are in themselves, but we can know the conditions under which they occur, and the general phenomena common to such conditions, that is, the general laws governing them: to explain light is to bring it under the laws of motion. Such knowledge is sufficient for practical purposes; to see in order to foresee (*voir pour prévoir*) is the motto of the positivist.

Evolution of Knowledge

The human mind seeks to reduce everything to unity, but this is a mere subjective bent. We cannot reduce the many different laws of nature to a single all-embracing law; experience reveals too many irreducible differences for that. The term positive, says Comte, means *real, useful, certain and indubitable, exact,* it means the opposite of *negative:* positive knowledge is not mere negation or criticism.

It is also necessary, however, to construct a positive *philosophy,* which shall collect and arrange the general laws yielded by the different sciences, give us the method common to them, and show how these sciences are connected with one another,—that is, provide us with a classification of the sciences. Such a synthesis is of value to education as well as a means of overcoming the evils of specialism. Comte arranges the sciences according to the order in which they enter upon the positive stage: mathematics (arithmetic, geometry, mechanics), astronomy, physics, chemistry, biology, and sociology (to which he later adds ethics as the culmination of them all). This classification also exhibits a gradual advance from simplicity to complexity: mathematics, which contains the simplest, most abstract and universal propositions, comes first and forms the basis of all the rest, while sociology, the most complex of all, presupposes the sciences preceding it. The reason for this is that the simpler and more general the laws are, the wider will be their application. The truths of geometry hold for all phenomena in so far as they are regarded as extended (static view); those of mechanics hold for all phenomena in so far as they are regarded as in motion (dynamic view). Although every science in the ascending series presupposes its predecessors, it is not assumed that the phenomena with which it deals can be derived from the simpler ones,—the phenomena of life, for example, from phenomena of motion. That would be materialism, and Comte rejects materialism: we cannot explain organic phenomena mechanically or chemically. In each of the six fields of science, a new element is added which is distinct from those of the others. The same remarks apply to phenomena within a single science: heat is distinct from electricity, the plant from the animal, the various organic species from each other.

Classification of the Sciences

We miss in Comte's list of sciences the names of logic, psychology, and ethics. Logic as the science of intellectual functions would seem to take precedence even of mathematics, but the French philosophers regarded it as a branch of psychology; and psychology was not a special science, according to Comte. Mind or soul is a metaphysical entity and does not exist for positivism: we cannot observe mental processes subjectively, in-

trospection being impossible. All we can do is to study them objectively, that is, the organic phenomena with which they are connected and the human institutions in which they are expressed. Psychology, therefore, belongs, in part, to biology, in part to sociology. The fact is, the insertion of psychology into the scheme would have given Comte a great deal of trouble; geometry and mechanics would not be applicable to unique processes like mental processes, and the classification would break down. But if organic processes, though regarded as unique and not explainable mechanically, can have their place in the series, it is not to be seen why psychology should be excluded. Comte did not work out these ideas consistently; his interest in the phrenology of Gall and his aversion to all spiritualistic psychology led him to regard psychic states as functions of the brain.

The last and most complex science in the scale, and the one about to enter upon the positive stage, is sociology, which depends upon the others, especially upon biology (for society is made up of organic individuals), and comprises economics, ethics, the philosophy of history, and a large part of psychology. Comte claimed the credit of being the founder of this science, and gave it its name. It is impossible to study psychology, ethics, and economics apart from the science of society and the philosophy of history: the phenomena with which they deal stand in reciprocal relation with society and social evolution. Social statics is a study of society as a fact, of the laws of its existence, of the social *order;* social dynamics, a study of society in its evolution: it is a philosophy of history and aims to trace the *progress* of society.

Social Science

Social life owes its origin, not to self-interest, but to the social impulse. Man has egoistic impulses, and these, too, are indispensable to society. The nobler impulses, the altruistic feelings, supported by intelligence, gain the mastery over the selfish instincts, which are stronger in the beginning than *altruism* (a term coined by Comte) and which must be held in check in order to make society possible. The family is the social unit and the preparation for a larger social life. Intelligence is the leading principle in progress. Progress consists in the development of the human functions which distinguish man from the

brute, in the advance of reason and the higher or nobler impulses. Society passes through three stages of evolution, corresponding to the stages of intelligence already pointed out. Militarism is characterized by order, discipline, force: organization is the primary condition of progress. It is followed by the revolutionary stage, the stage of political rights, a transition period of negation. The positive stage, "the definitive stage of humanity," is the stage of industrialism, in which the emphasis is placed on the social problem instead of the political problem and individual rights. It is the era of experts whose function it will be to guide scientific research, to superintend public instruction, to inform public opinion, on the one hand; and to regulate social production on the other. Comte is opposed to popular representation on the ground that it would make the experts dependent on the ignorant. Public opinion is the antidote to misgovernment. He believes that the social problem is, after all, a moral problem, that the positive State will be brought about by a change in ideas and customs.

As we pointed out in the beginning, Comte's leading thought is the reform of society, and this necessarily rests on an ethical ideal. He interprets history in the light of his ideal: progress means the realization of the ideal of humanity, it means the perfection of man in society. History is moving toward the ideal; intellectual, social, and ethical evolution is making straight for positivism: *the definitive stage of humanity.* It is not difficult to see that positivism ends in dogmatism: it becomes a system of metaphysics.

Ethics and the Religion of Humanity

During his later period, Comte laid greater stress on the emotional and practical phases of life and brought the ethical ideal into bolder relief. Formerly, intelligence had been emphasized as the great factor in the reform of society; now reason and science are brought into the right relation with feeling and practice. The objective method is replaced by the subjective method, subjective in the sense that it connects knowledge with the satisfaction of subjective needs and with the desire for unity and simplicity in our world-view. Ethics is added to the sciences as the seventh and highest science, as the goal of which all the others are parts. The great human problem is to subordinate,

so far as possible, the personality to sociability; everything must be related to humanity, love is the central impulse, to live for others the absolute demand. Humanity is the Great Being worthy of worship.

Positivism did not put an end to the spiritualistic eclecticism of Cousin. A reaction, however, arose within this school itself, and a number of independent thinkers (Bordas-Demoulin, Ravaisson, Secrétan, Vacherot) attacked eclecticism, some from the standpoint of science, others from the standpoint of German idealism. We also find a Platonic-Christian movement within the Catholic clergy of France (Lamennais, 1782-1854), and a revival of the Thomistic system, especially at the University of Louvain, Belgium, which continues to be a seat of serious philosophical study to this day. Positivism, however, which had a large following (Littré, Taine, Renan), was not favorable to metaphysical studies, but encouraged specialism in psychology (Th. Ribot) and sociology (G. Tarde, E. Durkheim). The theory of evolution likewise helped to weaken the influence of spiritualism.

Idealistic Opposition to Positivism

Under the leadership of C. Renouvier (1818-1903), editor of *Critique philosophique,* a school has arisen which bases itself on Kant's criticism and opposes both positivism and the traditional spiritualism. Renouvier calls his system Neocriticism, which, however, develops into an idealistic metaphysics,—similar to the monadology of Leibniz,—of which pluralism and personalism are the characteristic features. There is no noumenal world, no thing-in-itself; things, so far as they are presented, are phenomena, and nothing exists for us but ideas. The notion of an actual infinitude is a logical contradiction, as well as a contradiction of experience. The universe is a finite sum of finite beings. Hence, there can be no infinite transitions in phenomena; whence follows the necessity of the notion of discontinuity. The idea of discontinuity implies the possibility of uncaused beginnings and free will. Knowledge, therefore, is relative, and is limited to the discovery of the relations existing between things.

Some of Renouvier's ideas were anticipated by Antoine Cournot (1807-1877), who finds chance and contingency in na-

ture and in history. The laws of nature are only approximately true. Chance consists in the combination or concurrence of events which belong to independent series of occurrence.

Among those who have been influenced by Renouvier are F. Pillon, E. Boutroux, H. Bergson, and William James.

Works of Cournot: *La théorie des chances et des probabilités,* 1843; *Essai sur les fondements de nos connaissances,* 1851; *Traité de l'enchainement des idées fondamentales dans les sciences et dans l'histoire,* 1861. Works of Renouvier: *Essais de critique générale,* 4 vols., 1854-1864, 2d ed., 1875-1896; *La nouvelle monadologie* (with L. Prat), 1899; *Le personnalisme,* 1902; *Derniers entretiens,* 1905. Valuable critical articles by Pillon in *Année philosophique,* of which he is the editor. Works of Boutroux: *De la contingence des lois de la nature,* 1874, 4th ed., 1902; *Études d'histoire de la philosophie,* 2d ed., 1901, transl. by Rothwell; *Science et religion,* 1908, transl. by Nield; *Questions de morale et de pédagogie,* 1896, transl. by Rothwell. For James and Bergson, see sections 72 and 73.

On the philosophy of the second half of the nineteenth century see: Lévy-Bruhl, *op. cit.;* Boutroux, *La philosophie en France depuis 1867;* Ueberweg-Heinze, *op. cit.,* §§ 40-46. Bibliography of the movement in Ueberweg-Heinze. Cf. also Höffding, *Moderne Philosophen* (French transl.: *Philosophes contemporains);* monographs on Renouvier by Séailles, Janssens, Ascher; Feigel, *Der französische Neokritizismus.* For Cournot see *Revue de métaphysique et de morale,* May, 1905; Bottinelli, *A. Cournot.*

A. Fouillée (1838-1912) attempts to reconcile idealism and materialism in his voluntaristic and evolutionistic philosophy of *idées-forces.* Materialism is one-sided when it emphasizes motion to the exclusion of other factors; idealism is one-sided when it emphasizes thought. Mind and matter, consciousness and life, operate in nature as a single principle. Mind and matter are two abstractions of one unique and total reality, two ways of conceiving one and the same thing. All psychic phenomena are expressions of an impulse or *appétition.* Psychic existence is the only reality which is directly given to us, hence we have the right to interpret the world in analogy with active mind or *idées-forces.*

Fouillée's views are presented in: *La liberté et le déterminisme,* 1872; *L'évolutionisme des idées-forces* (main work), 1890; *La psychologie des idées-forces,* 1893; *La morale des idées-forces,* 1908; *La pensée,* 1912; *Esquisse d'une interprétation du monde,* 1913. See A. Guyau, *La philosophie et la sociologie d'A. Fouillée,* and works under Renouvier.

Jean Guyau (1854-1888), the brilliant pupil of Fouillée, emphasizes

the tendency in the universal life-impulse toward unification, which expresses itself in human altruism no less than in the forces of nature. The evolution of the principle of solidarity and sociality is the common characteristic of morality, religion, and art. Among Guyau's works are: *Esquisse d'une morale sans obligation ni sanction,* 1885, 5th ed., 1903; *L'irreligion de l'avenir,* 1887, 7th ed., 1904; *Éducation et hérédité,* 1889, 5th ed., 1900; *Les problèmes de l'esthétique contemporaine,* 1884, 6th ed., 1901. Fouillée, *La morale, l'art et la religion d'après Guyau,* 1889. The first three books have been translated.

67. Scottish Rationalistic Philosophy

Although English philosophy had shown a decided leaning toward nominalism and empiricism, and indifference to metaphysics, since the days of William of Occam, the opposing schools never entirely disappeared. We have already mentioned the Cambridge Platonists of the seventeenth century and the reaction against Hume represented by Thomas Reid and his school in the eighteenth and the beginning of the nineteenth century, when the common-sense philosophy dominated the Scotch universities. The value of the latter movement consisted not so much in its positive teachings as in its criticisms of empiricism and the impetus it gave, in England, to a more thoroughgoing examination of the popular doctrine. The Scottish philosophy later came under the influence of the critical philosophy of Kant in the persons of William Whewell (1795-1866) and Sir William Hamilton (1788-1856). Whewell, who is the author of *History of the Inductive Sciences, Philosophy of the Inductive Sciences,* and *Elements of Moral Philosophy,* finds in induction an element that is ignored by empiricism: the mind itself contributes to the knowledge of phenomena a number of ideas and principles by virtue of which the content of experience is organized and unified. Through them we interpret nature and translate its data into our own language, long before we become conscious of them. They are unconscious inferences and are necessary in the sense that their opposites are inconceivable.

William Whewell

Such fundamental ideas and principles act in simple apprehension; indeed, we cannot conceive of any activity of mind in which they are not at work. They are acquired and developed through experience, though not derived from experience: they

do not exist in the mind ready-made, but arise when the mind is set in motion; they seem to be ways the mind has of acting on its material. Among such principles Whewell mentions: space, time, cause, and purpose, as well as the moral axiom that we ought to do what is right. Like the common-sense philosophy, Whewell calls attention to certain principles of knowledge, but fails to subject these notions to careful analysis, and to bring unity into them. His works on the inductive sciences are works of merit; without them, John Stuart Mill tells us, he could not have accomplished his own task in this field.

Hamilton

Sir William Hamilton advances beyond the common-sense school, in the direction of Kantian criticism. He is a profounder thinker than Whewell, a keen logician and dialectician, and possesses a wider knowledge of the history of philosophy than any of his predecessors. Among his works are: *Discussions on Philosophy and Literature,* 1852, ff., and *Lectures on Metaphysics and Logic,* 1859. He was chiefly interested in moral and religious problems, and found in the critical philosophy a basis for his theology.

Hamilton holds that there are necessary or *a priori* truths,—simple self-evident truths which carry absolute conviction in themselves,—universality and necessity being the final tests of such truths. All men, for example, are convinced that two lines cannot ever inclose a space; indeed, they cannot possibly even imagine two lines inclosing space. In the case, however, of some necessary truths so-called,—the law of causality, the law of substance, and the laws of identity, contradiction, and excluded middle,—it is unthinkable that the deliverance of consciousness should not be true; while in the case of some contingent truths,—the existence of an external world,—this is not unthinkable, and yet we cannot practically believe in the falsity of it. The inconceivableness of the contradictory opposite of a proposition is no test of its truth, for the proposition itself may be equally inconceivable. Thus, free action and completely determined action are both inconceivable. A proposition must be positively necessary: it is so, when it is conceivable and its contradictory opposite is inconceivable. "All positive thought lies between two extremes, neither of which we can conceive as possible, yet as mutual contradictories the one or the other we must recog-

nize as necessary." This is Hamilton's law of the conditioned. He applies this law to the principle of causality. We cannot conceive of an absolute commencement of existence nor of an absolute termination. "We necessarily deny in thought that the object which apparently begins to be, really so begins; and we necessarily identify its present with its past existence." "We are compelled to believe that the object (that is, the certain *quale* and *quantum* of whose *phenomenal* rise into existence we have witnessed) did *really* exist prior to this rise under other forms. But to say that a thing previously existed under other forms is only to say, in other words, that a thing had causes." We are, however, also unable to conceive of an infinite non-commencement or of an infinite non-termination. Hence, we cannot regard the law of causality as possessing absolute certainty; it rests on mere negative inconceivability, and that, as we have seen, is not a test of truth. If the law were positively necessary, free will would be impossible, but since it is not a positive law, free will is possible. Whether the will is free or not, therefore, is to be decided by the evidence; and for the fact of liberty we have immediately or mediately the evidence of consciousness.

We can know only the conditionally limited; existence is not cognizable absolutely and in itself, but only in special modes, related to our faculties. If this is so, we cannot know the ultimate being, or God, for the ultimate is unconditioned. The Unconditioned is either absolute (that is, completed, perfected) or infinite, but it cannot be both, for Absolute and Infinite are contradictory opposites. Since, however, God must be either one or the other, and since we cannot decide which of them to apply to him, a rational theology is impossible. God cannot be known *a priori*. Not one of the advocates of speculative theology has ever been able to prove that God is either absolute or infinite, though many have defined him as both, which is contradictory. Hamilton did not hold that the notion of an Unconditioned is self-contradictory, nor that the notion of the Absolute or of the Infinite is so. It is possible to believe in God, it is possible to believe he is either absolute or infinite, it is not possible to believe he is both: but in no case can we *prove a priori* that he is either.

Another application of the law of the Unconditioned is the principle of substance and phenomenon. All our knowledge of mind and of matter is relative, conditioned; we are conscious only of existence as conditioned. I am compelled by a necessity of my nature to think of the phenomenon as the known phenomenon of an unknown substance. I cannot think this relative as *absolutely* relative,—this phenomenon as a phenomenon and nothing more. I can suppose it to be the phenomenon of something that does not appear; I conceive it as the accident of a subject or a substance.

Hamilton betrays the influence of the Scottish common-sense school in his doctrine of *natural realism:* we have a direct consciousness of the world as really existing. We believe that it exists because we know it, we feel it, we perceive it, as existing. But we do not perceive the material or mental *substance* directly. We perceive directly the phenomena, a certain series, or aggregate, or complement, of appearances, or phenomena manifested in coexistence. We must *think* these phenomena or qualities as phenomena of something, of something that is extended, solid, figured, and so on. This something is cognizable or conceivable only in its qualities, only in its effects, in its relative or phenomenal existence. A law of thought compels us to think something absolute and unknown as the basis or condition of the relative and known. What applies to matter applies to mind. Mind and matter, as known or knowable, are only two different series of phenomena or qualities: as unknown and unknowable they are two substances in which these different qualities are supposed to inhere. We, therefore, directly perceive qualities, attributes, phenomena, and not substances.

Veitch, *Hamilton;* Monck, *Hamilton;* Mill, *Examination of Sir William Hamilton's Philosophy;* also, for Hamilton and his school, see works on the Scottish philosophy by McCosh and Pringle-Pattison, and on English philosophy by Forsyth and J. Seth (pp. 254, f.); Höffding, *Englische Philosophie,* German transl. by Kurella; Ueberweg-Heinze, *op. cit.,* § 57. Bibliography in Ueberweg-Heinze.

68. Empiricism of John Stuart Mill

Hume had drawn what seemed to him the ultimate consequences of the presuppositions of empiricism. If our knowledge

is limited to impressions and their faint copies or ideas, and the self is a mere bundle of sensations, we have no universal and necessary knowledge: the notion of cause is reduced to the idea of temporal succession; and the consciousness of necessity accompanying it, to habit or belief; it is illusory to assume either a spiritual substance or a material substance as the cause of our sensations. Hume's reflections, ending as they did in partial skepticism, agnosticism, and phenomenalism, caused a violent reaction and led to the development of the common-sense philosophy of the Scottish school, as we have seen. Owing to the progress of the natural sciences, however, and the rise of positivism in France, the empirical conception again came to occupy the leading place in British thought during the middle of the nineteenth century. It based itself on the doctrines of Hume and Hartley and reached its highest form in the *Logic* of John Stuart Mill. Though this thinker did not escape the influence of Auguste Comte, whom he greatly admired, he had as his intellectual ancestors the leaders of the traditional English school, among them his own father, James Mill (1773-1836), and Jeremy Bentham (1748-1832), and had taken sides before the appearance of Comte's writings. There is, indeed, much in common between French positivism and latter-day English empiricism, enough to have induced some historians to regard the latter as an offshoot of the Comtian movement. The same attitude of mind characterizes both views: they both emphasize the value of facts and of scientific method, and are both, in principle, opposed to metaphysics; both aim at social reform and make the happiness and development of humanity the ethical ideal. The positivists, however, turn their attention to the methods and results of the special sciences and seek a classification and systematization of human knowledge, while the Englishman, following the traditions of his school, makes psychology and logic, which the Frenchmen neglect, his starting-point and finds in these the solution of his problems.

Empiricism and Positivism

John Stuart Mill (1806-1873) was the son of James Mill, a secretary in the East India Company and a writer on economic, political, sociological, and philosophical subjects. The elder Mill began the intellectual training of his son during the latter's infancy, and gave it his careful personal attention. He introduced him to the study of the philosophy

of the eighteenth century; and Hartley's psychology and Bentham's ethics made a great impression on the boy. Hartley's doctrine of the association of ideas became,—as it had been to his father,—the guiding principle of Mill's psychology and kindred studies, while Bentham's principle of utility, as he himself says, gave unity to his conception of things and a definite shape to his aspirations. In 1823, after a few years spent in travel and in the study of law, Mill entered the service of the East India Company, with which he remained until its abolition by Parliament in 1858. In 1865 he was elected to Parliament as a Liberal and served for three years, but his greatest influence on the political life of his country was exercised through his writings.

Logic, 1843; *Principles of Political Economy,* 1848; *Liberty,* 1859; *Thoughts on Parliamentary Reform,* 1859; *Representative Government,* 1860; *The Subjection of Women,* 1861; *Utilitarianism,* 1861; *Auguste Comte and Positivism,* 1865; *Examination of Sir William Hamilton's Philosophy,* 1865; edition of James Mill's *Analysis of the Human Mind,* 1869; *Dissertations and Discussions,* 1859-1874. His *Autobiography* and *Essays on Religion: Nature, The Utility of Religion,* and *Theism* were published after his death. Correspondence of Mill and Comte, ed. by Lévy-Bruhl; correspondence with d'Eichthal; *Letters,* ed. by Elliot, 2 vols. New ed. of works in *New Universal Library.*

Monographs on Mill by Douglas, Bain, Fox Bourne, Sänger, Lauret; Douglas, *Ethics of J. S. Mill;* Höffding, *Englische Philosophen;* McCunn, *Six Radical Thinkers;* Ribot, *Contemporary English Psychology,* transl. by Baldwin; Guyau, *La morale anglaise contemporaine.* See also works under Comte, p. 506, and English philosophy, pp. 254, f.

Science and Social Reform

The ideal of social and political reform gave direction to Mill's intellectual labors. He shared the eighteenth century's enthusiasm for progress and enlightenment and with it believed in the supreme efficacy of education, holding that there is no natural impulse which it cannot transform or destroy, and that human character will change with men's ideas. In order to bring about reforms, knowledge is necessary, knowledge of the right ends and knowledge of the means of realizing them. But in order to reach knowledge, correct methods must be employed, and to the study of these Mill addressed himself in his *Logic.* The wonderful progress of the natural sciences suggested an examination of scientific methods and their application in the mental or moral sciences: in psychology, ethics, economics, politics, and history. The investigation of methods of knowledge, however, could not be carried on successfully without a consideration of the general principles of the theory of knowledge, and such a study we have in the *Logic,* which has been called the most thorough-

going exposition of the epistemology of empiricism ever written.

Hume had taught that we cannot reach universal and necessary knowledge: we do not experience any necessary connection among things; the necessity of judgments, on which intuitionists lay so much stress, is merely the result of habit. All we know is our ideas, which follow one another in a certain temporal order, according to the laws of association by similarity, contiguity, and causality. Hartley worked out this theory of association, reducing Hume's three laws to the single law of contiguity: ideas call up ideas with which they have been associated in consciousness before; and sought to explain all mental processes as cases of this law. On the basis of this theory, knowledge is nothing but a firm and coherent association of ideas, and the so-called necessity of thought nothing but an expression of the firmness of these associations. To know, therefore, means to study the sequence of our ideas, to eliminate the accidental, transitory associations, and to discover the permanent, enduring, invariably recurring ones, the correct and valid sequences: this is accomplished by the methods of induction, which Mill describes as they are employed by modern experimental research. Hence, all inference and proof, and all discovery of truths not self-evident, consist of inductions and the interpretation of inductions: all our knowledge that is not intuitive comes exclusively from this source.

Logic

Mill's entire logical theory is based on the laws of association. The child infers that the fire will burn because fire and the burn came together before; the inference, in this case, is from one particular to another, and not from the universal to the particular, or from the particular to the universal. Here we have the elementary form of all inference. It makes no difference whether I infer from the fact that Peter died the death of Paul or the death of all men: in the latter case I am simply extending the inference to an indefinite number of particular cases instead of only one. I have passed from the known to the unknown in either case, and the same process of inference is involved. The conclusion in an *induction* embraces more than is contained in the premises.

Inductive Inference

The syllogistic process (All men are mortal, Paul is a man, hence he is mortal), therefore, is not a process of inference, because it is not a progress from the known to the unknown. In every syllogism, considered as an argument to prove the conclusion, there is a begging of the question: the proposition, Paul is mortal, is already presupposed in the general assumption, All men are mortal. The major premise of a syllogism does not prove the conclusion. The *inference* is finished when we have asserted that all men are mortal; the major premise is proved by the particular instances: it is a concise or compressed form of expression of the results of many observations and inferences, and of *instructions for making innumerable inferences in unforeseen cases.* It practically tells us what has already been found, registers what has been inferred, what events, or facts, have gone together and were, therefore, inferred to belong together, and gives directions for future inductive inferences.

Warrant of Induction

The question at once arises, What warrant have we for making such inferences? The assumption involved in every case of induction is that what happens once, will, under a sufficient degree of similarity, happen again, and not only again, but as often as the same circumstances recur. And what warrant have we for this assumption itself? The warrant of experience: it is a universal fact that the universe, so far as known to us, is so constituted that whatever is true in any one case is true in all cases of a certain description. This principle that the course of nature is uniform, is the fundamental principle or axiom of induction. It is, however, itself an instance of induction, one of the latest inductions to attain strict philosophical accuracy. If this is so, how can it be regarded as our warrant for all the others? Is not Mill here reasoning in a circle, proving the particular inductions by the law of the uniformity of nature and then proving this law by these inductions? No, says Mill, the principle of the uniformity of the course of nature stands in the same relation to *all* inductions, as the major premise of a syllogism always stands to the conclusion: it does not contribute to prove it, but is a necessary condition of its being proved (that is, the conclusion is not proved unless the law is true). The real proof that what is true of John, Peter, and others is true of all man-

kind, can only be, that a different supposition would be inconsistent with the uniformity which we know to exist in the course of nature. Mill regards the law as an abridgment or summation of our past experiences: it simply registers what has been observed. It does not prove the particular inductions, but merely increases their certainty. But though we may acquit Mill of the charge of circular reasoning here, it is plain that he fails to find a logical basis for his theory of induction. He does not accomplish what he promises, and seems, moreover, to be unconscious of the skeptical consequences of his position.

The uniformity in question, Mill also points out, is not properly uniformity, but uniformities. A certain fact invariably occurs whenever certain circumstances are present and does not occur when they are absent; the like is true of another fact; and so on. Such uniformities as exist among natural phenomena are called laws of nature. The problem of inductive logic is to ascertain the laws of nature and to follow them into their results. The purpose is to ascertain what kinds of uniformities have been found *perfectly invariable, pervading all nature,* and what are those which have been found to vary with difference of time, place, or other changeable circumstances. Some uniformities, as far as any human purpose requires certainty, may be considered quite certain and quite universal. By means of these uniformities we can raise multitudes of other inductions to the same point in the scale. For, if we can show with respect to any inductive inference that either it must be true or one of these certain and universal inductions must admit of an exception, the former generalization will attain the same certainty and indefeasibleness within the bounds assigned to it which are the attributes of the latter.

We have uniformities of simultaneity and uniformities of succession. In the laws of number and those of space, we recognize, in the most unqualified manner, the rigorous universality of which we are in quest. But the most valuable to us of all truths relating to phenomena are those which relate to the order of their succession. Of these truths, one only has been found that has never been, in any instance whatever, defeated or suspended by any change of circumstances. This is the law of causation, which is universal also

Law of Causation

in the sense that it is coextensive with the entire field of successive phenomena, all instances whatever of succession being examples of it. The truth that every fact which has a beginning has a cause, is coextensive with human experience.

The notion of cause is the root of the whole theory of induction, and it is, therefore, necessary to reach a clear and precise idea of it. The only notion of a cause which the theory of induction requires, is such a notion as can be gained from experience. The law of causation is but the familiar truth that invariability of succession is found by observation to obtain between every fact in nature and some other fact which has preceded it. To certain facts, certain facts always do, and, as we believe, will continue to succeed. We do not mean by the cause a mysterious and most powerful tie between things or some essence that actually produces something else. The invariable antecedent is termed the cause; the invariable consequent, the effect. The cause, philosophically speaking, is the sum-total of the conditions, positive and negative, taken together.

The objection might be urged against this definition of cause that it leaves out of account an important element, the idea of necessity or necessary connection. If the invariable antecedent is the cause, then night must be the cause of day, and day the cause of night. To obviate the objection, Mill adds that causality implies not only that the antecedent always *has* been followed by the consequent, but that, as long as the present constitution of things endures, it always *will* be so. All that can be meant by the term necessity is *unconditionalness.* That which is necessary, that which *must* be, means that which will be. Hence, the cause of a phenomenon is the antecedent, or the concurrence of antecedents, on which it is invariably *and unconditionally* consequent. The question, How do we know that a sequence is unconditional? is answered: By experience. In some cases we are not sure that a hitherto invariable antecedent *is* the invariable antecedent. But there are certain primeval or permanent causes of which, or some combination of which, all phenomena are the effects, and these would be unconditional. One knowing all the agents which exist at the present moment, their collocation in space, and all their properties,—in other words, the laws of their agency,—could predict the whole sub-

sequent history of the universe. Anyone acquainted with the original distribution of all natural agents, and the laws of their succession, would be able to construct *a priori* the whole series of events in the history of the universe, past and future.

Mill's assumption, we see, is that inexorable law and order reigns in the universe, that there are invariable, *unconditional* sequences, and that these can be ascertained by induction, deduction, and verification, which constitute the scientific method. This doctrine, if consistently carried out (which it is not), would lead to a rationalistic science and make possible, in theory at least, an absolute body of knowledge. It does not, however, agree with his theory of induction, according to which the idea of causation can be nothing but a belief in the succession of phenomena, a belief that rests on the succession of ideas in consciousness. Mill wavers between the rationalistic and empiricist conceptions of causality: the view that causality implies *necessary* connection, and the view that it means merely invariable temporal succession. On the latter hypothesis, all we can say is that the belief in causation increases with our experiences of succession. And, indeed, this is the view generally taken by Mill when he examines our right to assume the universality of the law of causation, as we do in all the inductive methods. We cannot justify the assumption, he tells us, by the disposition of the human mind to believe it, for belief is not proof, and, besides, not one of the so-called instinctive beliefs is inevitable. Even now, many philosophers regard volitions as an exception to the law of causation. His position on this question agrees with his view of the uniformity of nature. Indeed, the universality of the causal law is merely a case of the uniformity of sequences in nature. We arrive at the *universal* law of causation by generalizing from many *partial* uniformities of sequence. It is true that we arrive at the law by the loose and uncertain method of induction *per enumerationem simplicem*, and it might seem, at first sight, that such a principle would prove a weak and precarious basis for scientific induction. But the precariousness of the method is in an inverse ratio to the largeness of the generalization, and the law of causation is the most extensive, in its subject-matter, of all generalizations which experience warrants, respecting the sequences and coexistences of phenomena.

In point of certainty, it stands at the head of all observed uniformities, and it adds to these as much proof as it receives from them. The criticism that it is a paradox to base induction on the law of causation, and then to explain this itself as a case of induction, is answered by Mill in the same manner in which he answers a similar objection against the uniformity of nature. When we have ascertained that the particular conclusion is liable to no doubt except the doubt whether every event has a cause, we have done all that can be done for it.*

In matters of evidence, we neither require nor can attain the absolute. Whatever has been found true in innumerable instances, and never found to be false, after due examination, in any, we are safe in acting on as universal provisionally, until an undoubted exception appears; provided that the nature of the case is such that an exception could scarcely have escaped notice. But we cannot affirm confidently that this general law prevails beyond the possible range of our experience, in distant parts of the stellar region. It must be received not as a law of the universe, but of that portion of it only which is within the range of our means of sure observation, with a reasonable degree of extension to adjacent cases.

A priori Truths

The law of the uniform course of nature and the law of universal causation are both the results of experience. They are not necessary or *a priori* truths; indeed, there are no such truths. Even the principles of logic and the generalizations of mathematics are generalizations from experience. The proposition that two straight lines cannot inclose a space is an induction from all the experiences we have ever made. Besides, mathematical propositions are only approximately true; we cannot conceive a line without breadth; the radii of a perfect circle would be equal, but such circles do not exist. There are no real points, lines, circles which conform to the definitions of geometry; they are idealized copies of the points, lines, etc., which we experience,—abstractions, mere fic-

* Mill has, however, forgotten his assumption of causation as an *unconditional* sequence, and that there are certain primeval and permanent causes in nature, which determine the whole series of events in the history of the universe. On this view, the particular conclusion could be liable to no doubt whatever, for it assumes that *all* phenomena are the effects of these primeval and permanent causes of nature.

tions. Mathematical propositions, therefore, have only hypothetical validity. The argument that propositions, the opposite of which is inconceivable, cannot be derived from experience, is also unavailing. The inconceivableness of a thing proves nothing against the experimental origin of our conviction with respect to it. The results of the so-called deductive sciences are necessary in the sense of necessarily following from first principles called axioms and definitions; that is, of being certainly true if these axioms and definitions are true. These latter are experimental truths which rest on superabundant and obvious evidence, while the axioms are but the most universal class of inductions from experience, the simplest and easiest cases of generalization furnished to us by our senses and by our internal consciousness. The demonstrative sciences are all without exception inductive sciences, their evidence is that of experience, but they are also hypothetical sciences because their conclusions are only true on certain suppositions, which are, or ought to be, approximations to truth, but are seldom if ever exactly true.

With critical idealism, Mill holds that we can know phenomena only and not things-in-themselves. On the inmost nature of the thinking principle, as well as on the inmost nature of matter, we are and, with our faculties, must always remain in the dark. As bodies manifest themselves to me only through the sensations of which I regard them as the causes, so the thinking principle, or mind, in my own nature makes itself known to me only by the feelings of which it is conscious. But if all we know is sensations, the effects of an unknown external cause, how do we come to believe in things independent of us? Mill gives a psychological explanation of our belief, based on memory, expectation, and the laws of association. I see a piece of white paper on the table, I shut my eyes or go into another room; I no longer see the paper, but I remember it and expect or believe I shall see it again, under the same circumstances, if the same conditions exist. I form the notion of something permanent, perduring; the so-called external thing is simply the possibility that certain sensations will recur in the same order in which they have occurred. My past sensations are permanent possibilities of sensation;—there is always the possibility of their return-

External World and Self

ing,—the external world is a permanent possibility of sensation. We come to believe that the permanent possibilities are the true realities, and the passing sensations merely the accidents or representations of the possibilities. The belief, then, in external objects is the belief that sensations may recur. This belief is not an original belief, not an innate notion, but the result of our experience, an acquired belief, the result of the association of ideas. Mill is not here trying to prove that objects *are* external to us; he is simply trying to account for the fact that, although we experience nothing but a succession of ideas, we are yet able to form the picture of a persisting world of objects outside of consciousness.

We find also, however, the thing-in-itself in Mill's philosophy, the notion of an unknown something or external cause, to which we refer our sensations. In spite of his idealism, Mill cannot let go of the transcendent substance, or cause of sensations. The world of knowledge is a phenomenal world, but there is, besides, a noumenal world, an unknown and unknowable world of things-in-themselves. We have a problem here which Mill does not consider: the problem of the possibility of such a world and of our notion of it, *on his own premises.* He speaks of the thing-in-itself as substance and cause, without even inquiring into the possibility of such a view on his definition of substance and cause. If by substance we mean a complexus of sensations, and by cause the invariable phenomenal antecedent, how can we speak of something outside of the sensation-series as substance and cause?

Mill's conception of mind, or the ego, is somewhat vacillating. With Hume and James Mill, he calls mind a series of feelings. He tries to explain our belief in the constancy or permanency of the self as he explained our belief in an external world: it is the belief in a permanent possibility of feelings, and this belief accompanies our actual feelings. But he sees difficulties in the associationistic conception of mind as a mere succession of feelings and is frank enough to confess them. "If, therefore, we speak of mind as a series of feelings," he says, "we are obliged to complete the statement by calling it a series of feelings which is aware of itself as past and future; and we are reduced to the alternative of believing that the mind, or ego,

is something different from any series of feelings, or possibilities of them, or of accepting the paradox that something which *ex hypothesi* is but a series of feelings, can be aware of itself as a series. . . . I think by far the wisest thing we can do is to accept the inexplicable fact, without any theory of how it takes place; and when we are obliged to speak of it in terms which assume a theory, to use them with a reservation as to their meaning." *

As was pointed out before, Mill was deeply interested in the reform of society and the happiness of man. He believed that the progress of knowledge in the social and political fields would be attended by results equal to those of the natural sciences. But in order to attain such knowledge, he held it to be necessary to apply the methods which had been so successfully employed in physics, anatomy, and physiology. What is needed, he insists, is a reform of the mental and moral sciences.

Mental and Moral Sciences

The scientific treatment of human nature, however, presupposes that there is order, uniformity, law, invariable sequence in the mental realm; and the question at once arises: Can there be science here; are human actions subject to law? The objection is raised that man is not subject to law, not determined, but free. Mill finds, with Hume, that the chief objection to the necessitarian doctrine rests on a misapprehension. Determinism, properly understood, means invariable, certain, and unconditional sequence, and not compulsion or restraint, not that one phenomenon *compels* another, that a given motive compels a certain effect. It means: Given motives, character, and circumstances, we can predict conduct. The act does not *necessarily* follow on a certain condition; other conditions may supervene to bring about a different result. Necessity means that a given cause will be followed by the effect, subject to all possibilities of counteraction by other causes; not that the cause is irresistible. The fatalistic error is that my character is molded *for* me, not *by* me, whereas

* Many inconsistencies in Mill's thought are due to his faithful adherence to the English association-psychology, which he inherited from his father, and to his tacit acceptance, or at least appreciation, of many of the doctrines of the rationalistic thinkers of his time.

the desire to mold my character is a cause. I can change my character if I *will;* I can resist my habits and temptations if I *wish.* The sense of moral freedom consists in the consciousness that I can if I wish. Another misapprehension is that the motive of my action is always the anticipation of pleasure or pain. According to the law of association, pleasure or pain as a motive drops out, and I form a habit of desiring or willing without being moved by the thought of pleasure or pain.

Wherever, then, facts follow each other according to law, we can have science. These laws, however, may not have been discovered, and, indeed, may not be discoverable by our existing resources. We cannot predict in the science of human nature because we do not know *all* the circumstances and because we do not know the characters of the individuals. Yet, many of the effects are determined by general causes; they depend on circumstances and qualities common to all mankind. With regard to these, we can make predictions which will *almost* always be verified, and we can formulate general propositions which are almost always true. Such approximate generalizations must be connected deductively with the laws of nature from which they result; we must show that they are corollaries from the universal laws of nature. In other words, we need a deductive science of human nature. We do not ask, however, what is the *nature* of mind, but what are the laws of its various thoughts, emotions, volitions, and sensations. Moreover, psychology is not physiology; its subject-matter is not nerve-excitations but mental events. The simple and elementary laws of mind are found by the ordinary methods of experimental inquiry. Among such laws are the law of reproduction (memory) and the laws of the association of ideas: these compose the abstract or universal portion of the philosophy of human nature. All the maxims of common experience (*e.g.,* old men for counsel, young men for war) are the results or consequences of these laws. We have no assurance, however, in the case of such empirical laws, that they will hold true beyond the limits of our observation, because the consequent (wisdom, for example) is not really the effect of the antecedent (old age), and because there is ground for believing that the sequence is resolvable into simpler sequences. The real scientific truths are the causal laws

which explain these empirical maxims; the latter verify the theory. Empirical laws are never exactly true except in the simplest sciences, *e.g.*, in astronomy, where the causes, or forces, are few in number: few causes, great regularity.

Psychology ascertains the simple laws of mind in general; it is a science of observation and experiment. Ethology, or the science of the formation of character, traces the operation of these simple laws in complex combinations of circumstances and is altogether deductive. The latter science is one still to be created; its great problem is to deduce the requisite middle principles from the simple or general laws of psychology; to determine from the general laws of mind, combined with the general position of our species in the universe, what actual or possible combinations of circumstances are capable of promoting or of preventing the production of those qualities of human nature (or characters) which are interesting to us. Such a science will be the foundation of a corresponding art, of the art of education. To be sure, verification *a posteriori* must go hand in hand with deduction *a priori*. The conclusions of theory cannot be trusted unless confirmed by observation; nor those of observation, unless they can be affiliated to theory, by deducing them from the laws of human nature and from a close analysis of the circumstances of the particular situation.

Ethology

Next, after the science of individual man, comes the science of man in society,—of the actions of collective masses of mankind and of the various phenomena which constitute social life. Can we make the study of politics and of the phenomena of society scientific? All phenomena of society are phenomena of human nature, generated by outward circumstances upon masses of human beings; hence the phenomena of society, too, must conform to fixed laws. Prediction is impossible here because the data are innumerable and perpetually changing, and the multitude of causes is so great as to defy our limited powers of calculation. There are two erroneous methods of philosophizing on society and government, the experimental or chemical mode of investigation and the abstract or geometrical mode. The true method proceeds deductively indeed, but by deduction from many, not from one

Social Science

or a very few, original premises (as in geometry); it considers each effect as (what it really is) an aggregate result of *many* causes, operating sometimes through the same, sometimes through different mental agencies or laws of human nature. The social science is a deductive science, not after the model of geometry, but after that of the more complex physical sciences. It is difficult, to be sure, to calculate the result of the conflicting tendencies which are acting in a thousand different directions and promoting a thousand different changes at a given instant in a given society. But our remedy here consists in *verification:* the process of comparing our conclusions either with the concrete phenomena themselves or, when such are obtainable, with their empirical laws.

Sociology, however, as a system of deductions *a priori,* cannot be a science of positive predictions, but only of *tendencies.* All its general propositions are, therefore, hypothetical: they are grounded on some suppositious set of circumstances and declare how some given cause would operate in those circumstances, supposing that no others were combined with them. Mill also points out that different species of social facts, being, in the main, dependent on different kinds of causes, *e.g.,* the desire of wealth, must be studied apart, which gives us distinct and separate, though not independent, branches or departments of sociological speculation. Political economy, for example, proceeds to inquire into the laws which govern various operations, under the supposition that man is occupied solely in acquiring and consuming wealth. What are the actions which would be produced by the desire of wealth if it were unimpeded by others? The conclusions, however, of each separate science must afterward be corrected for practice, by the modifications supplied by the other separate sciences.

But there can be no separate science of government, because that is the fact which is mixed up, both as cause and effect, with the qualities of the particular people or of the particular age. It must be a part of the general science of society. In this general science of society, nothing of a really scientific character is possible except by the inverse deductive method. That is, it asks not what will be the effect of a given cause in a certain state of society, but what are the causes which produce, and

the phenomena which characterize, states of society generally. The fundamental problem is to find the laws according to which any state of society produces the state which succeeds it and takes its place. This opens up the question of the progressiveness of man and society. There is a progressive change both in the character of the human race and in their outward circumstances. History, when judiciously examined, affords empirical laws of society. Sociology must ascertain these and connect them with the laws of human nature, by deductions showing that such were the derivative laws naturally to be expected as the consequences of those ultimate ones. The only check or corrective on the empirical laws is constant verification by psychological and ethological laws. The empirical laws are uniformities of coexistence and uniformities of succession, and we have, in consequence, *social statics* and *social dynamics.* Social dynamics is the study of society considered in a state of progressive movement; social statics is the study of the *consensus,* that is, of the mutual actions and reactions of contemporary social phenomena, the study of the existing order. One of the main results of the science of social statics would be to ascertain the requisites of stable political union, among which Mill mentions: a system of education, the feeling of allegiance or loyalty, and sympathy.

It is necessary to combine the statical view of social phenomena with the dynamical, considering not only the progressive changes of the different elements, but the contemporaneous condition of each; and thus obtain, empirically, the law of correspondence, not only between the simultaneous states, but between the simultaneous changes, of those elements. This law of correspondence it is which, duly verified *a priori,* would become the real scientific derivative law of the development of humanity and human affairs. The evidence of history and that of human nature show that the state of the speculative faculties of mankind, including the nature of the beliefs which by any means they have arrived at, concerning themselves and the world by which they are surrounded, is predominant among the agents of social progress. The influence of speculation is the main determining cause of the social progress; all the other dispositions of our nature which contribute to that progress being

dependent on it for the means of accomplishing their share of the work. The order of human progression in all respects will mainly depend on the order of progression in the intellectual convictions of mankind, that is, on the law of the successive transformations of human opinions.* But can this law be determined, at first from history as an empirical law, then converted into a scientific theorem by deducing it *a priori* from the principles of human nature? To do this, it is necessary to take into consideration the whole of past time, to the memorable phenomena of the last and present generations. It has become the aim of really scientific thinkers to connect by theories the facts of universal history.

Ethics

In his ethical theories Mill largely follows the traditional English hedonistic school, the most important representatives of which are Locke, Hutcheson, Hume, and J. Bentham (1748-1832). The reading of Dumont's *Traité de législation,* an exposition of Bentham's principal speculations, Mill regarded as an epoch in his life, one of the turning-points in his intellectual history. In his *Utilitarianism,* he agrees with Bentham that happiness, or the greatest good of the greatest number, is the *summum bonum* and the criterion of morality. He differs from his master, however, on several important points. According to Bentham, the value of pleasures is to be measured by their intensity, duration, certainty or uncertainty, propinquity or remoteness, fecundity, purity, and extent (the number of persons affected by them). No difference is to be made in quality; other things being equal, "push-pin is as good as poetry." Mill teaches that pleasures also differ in *quality,* that those which go with the exercise of intellectual capacities are higher, better, than sensuous pleasures, and that persons who have experienced both prefer the higher ones. No intelligent person would consent to be a fool; no instructed person would be an ignoramus; no person of feeling or conscience would consent to be selfish or base. You would not exchange your lot for that of a fool, dunce, or rascal, even if you were convinced that a fool, dunce, or rascal is better satisfied with his lot than you with yours. It is better to be a

* Thomas H. Buckle (1821-1862) attempts to show that progress depends solely on intelligence in his *History of Civilization in England,* 1857-1861.

human being dissatisfied than a pig satisfied; it is better to be a Socrates dissatisfied than a fool satisfied. The fool and the pig may think otherwise, but that is because they know only one side of the question, the fool's and the pig's. Bentham and Mill also agree that we ought to strive for the greatest happiness of the greatest number; but Bentham justifies this on the ground of self-interest, while Mill bases it on the social feelings of mankind, the desire to be in unity with our fellow-creatures. As between the agent's own happiness and that of others, he tells us, Utilitarianism requires him to be as strictly impartial as a disinterested and benevolent spectator. " In the golden rule of Jesus of Nazareth, we read the complete spirit of the ethics of utility. To do as one would be done by, and to love one's neighbor as oneself, constitute the ideal perfection of utilitarian morality." Indeed, the greatest happiness principle is a mere form of words without rational signification, unless one person's happiness, supposed equal in degree (with the proper allowance made for kind), is counted for exactly as much as another's; Bentham's dictum, " Everybody to count for one, nobody for more than one," might be written under the principle of utility as an explanatory commentary.

Mill's Utilitarianism, like many other of his theories, vacillates between opposing views; in addition to the empirical association-psychology with its hedonism, egoism, and determinism, we find leanings towards intuitionism, perfectionism, altruism, and free will. The very inconsistency of the theory, however, made it attractive to many minds, and there is much in it with which the opposing schools may agree. As Green pointed out, it had great practical value; it substituted a critical and intelligent for a blind and unquestioning conformity. The theory of the greatest happiness of the greatest number has tended to improve human conduct and character; it has helped men to fill up their ideals in a manner beneficial to a wider range of persons. And it has done this, we may add, not because of its hedonistic elements, but because of the emphasis which it placed on universalism; for, after all, what the Utilitarians were aiming at was the realization of a better social life, in which each man should count for one and no one for more than one. Mill, particularly, became the philosophical spokesman of liberalism in England, and fought

the intellectual battles of democracy. In his works on *Liberty* and the *Subjection of Women* he insisted on the fullest possible individual rights because he regarded social well-being as inevitably bound up with individual well-being. He pointed out "the importance, to man and society, of a large variety in types of character, and of giving full freedom to human nature to expand itself in innumerable and conflicting directions," and he regarded the repression of women as a greater loss to the community than to women themselves. In the first edition of his *Political Economy* (1848), he favored economic individualism, but in time his "ideal of ultimate improvement went far beyond Democracy" and brought him close to Socialism. "While we repudiated with the greatest energy," he tells us in his *Autobiography*, "that tyranny of society over the individual which most Socialistic systems are supposed to involve, we yet looked forward to a time when society will no longer be divided into the idle and the industrious; when the rule that they who do not work shall not eat, will be applied not to paupers only, but impartially to all; when the division of the produce of labor, instead of depending, as in so great a degree it now does, on the accident of birth, will be made by concert, on an acknowledged principle of justice; and when it will no longer either be, or be thought to be, impossible for human beings to exert themselves strenuously in procuring benefits which are not to be exclusively their own, but to be shared with the society they belong to. The social problem of the future, we considered to be, how to unite the greatest individual liberty of action, with a common ownership in the raw material of the globe, and an equal participation of all in the benefits of combined labor." He had an abiding faith in the possibilities of human nature; "education, habit, and the cultivation of the sentiments, will make a common man dig or weave for his country, as readily as fight for his country."

Among those teaching Utilitarianism is Henry Sidgwick (1838-1900; *Methods of Ethics,* 6th ed., 1901, *History of Ethics,* 5th ed., 1902, *Elements of Politics,* 2d ed., 1897), whose work on ethics also shows the influence of Butler and Kant. He abandons the psychological hedonism of Mill, but accepts *ethical* hedonism,—the view that universal happiness is the highest good or ultimate standard of right and wrong. There are self-evident practical principles which

serve as guides in reaching the goal: rational self-love or prudence, the duty of benevolence, and justice. (For the hedonistic school see Thilly, *Introduction to Ethics,* chaps. vi, viii.)

69. Evolutionism of Herbert Spencer

Spencer's ideal of knowledge is that of a completely unified system of thought. The knowledge of the ordinary man is ununified, disconnected, inconsistent; the various parts do not hang together. Science furnishes us with partially-unified knowledge. Philosophy, however, is completely-unified knowledge, an organic system: its problem is to discover the highest truths from which the principles of mechanics, physics, biology, sociology, and ethics can be deduced. All these propositions must be in harmony with one another. In the *First Principles,* which forms the basis of the entire system, the fundamental axioms are set forth, which are afterward applied in the *Principles of Biology, Principles of Psychology, Principles of Sociology,* and *Principles of Ethics.* In the last-named book we have the restatement of all the generalizations reached in the preliminary works: so that the truths of ethics are grounded on the results of all the other fields of knowledge. These generalizations of the sciences may be empirically ascertained, but they can also be derived from first principles.

Ideal of Knowledge

Spencer calls his philosophy *synthetic philosophy,* and would agree with Wundt that it is the function of such a universal science to combine into a consistent system the universal truths arrived at by the particular sciences. In this respect, he differs from Hamilton and Mill. Hamilton offered no system of philosophy at all and regarded it beyond human capacity to offer one, the Absolute being unknowable. Mill criticised Comte for his relapse into philosophy in attempting to unify the sciences. It is true, Mill, too, has the ideal of a system of truths held together by universal principles in his logic of the moral sciences, and also suggests the possibility of an *a priori* science of nature, but he himself made no effort to systematize his thoughts; indeed it was impossible, from his general standpoint, to reach a universal synthesis, as his predecessor Hume clearly saw. Spencer also differs from the empiricists in his attempt

to base knowledge on what Kant called *a priori* forms of the mind, and to reduce these functions to simple principles. In this respect, he is influenced by the critical philosophy, with which he became acquainted largely through Hamilton's works. All our knowledge, he holds, rests on the primary act of thought; even the skeptic who seeks to deny the possibility of knowledge presupposes the basal functions of thinking. Knowledge would be impossible if it were not for the mind's capacity to discover likeness and difference as well as for its demand for logical consistency. None of these functions is the result of individual experience. Applying the evolutionary hypothesis, Spencer attempts to explain them as products of racial experience, thus seeking a compromise between intuitionism and empiricism from the side of empiricism. Absolute uniformities of experience generate absolute uniformities of thought. External uniformities are repeated for millions of generations, giving rise to fixed associations of ideas and necessary forms of thought. How it is possible for such connections to be made at the dawn of knowledge as are now not possible without an *a priori* synthetic mind, Spencer does not tell us. Nor does he establish the validity of knowledge on this basis: the fact that principles, which are felt to be necessary now, represent the inherited experiences of countless generations of men, does not guarantee their absolute truth.

Herbert Spencer was born in 1820 at Derby, England, the descendant of a family of teachers. He seems to have inherited his intellectual gifts from his father, who is described as a man of fine culture and independence of thought, and whose example in teaching his pupils to think instead of to memorize, influenced Spencer's views on education. Owing to the boy's delicate health, his father did not push him in his work, and we hear that he was inattentive and lazy, stubborn and disobedient at school. He made better progress outside of the class-room, under the guidance of his father, who taught him to draw from nature, encouraged his desire to make collections, and introduced him to physical and chemical experiments. Spencer afterward (1833-1836) received instruction from his uncle, Thomas Spencer, a clergyman of the established church, a man of public spirit and democratic ideals, who was to prepare him for Cambridge, but Spencer refused to go to a place where things were taught in which he was not interested. He could grasp principles and draw conclusions, and surpassed his fellow-students in mathematics and mechanics, but memorizing words and rules of grammar did not appeal to him. His works show the effects of the

manner in which he was trained: he is independent, original, and natural. In 1837 he assisted his father in teaching, and then studied civil engineering. He followed his profession intermittently until 1846, when he devoted himself to journalism. His spare hours, which were many, he devoted to the study of geology and other sciences. His first great work, which attracted the attention of a small though select circle of thinkers, was *Social Statics* (1848-1850). In 1852 Spencer relinquished his editorship of the *Economist* and devoted the rest of his life to working out his system of synthetic philosophy, a prospectus of which appeared in 1860. He suffered great financial losses in publishing his works, and his literary ventures did not prosper until American admirers arranged for the publication of his books in the United States. He died in 1903.

Proper Sphere of Government, 1842; *Social Statics,* 1850; *Principles of Psychology,* 1855; *Education,* 1858-1859; *First Principles,* 1860-1862; *Principles of Biology,* 1864-1867; *Principles of Sociology,* 1876-1896; *Principles of Ethics,* 1879-1893; *The Man versus the State; Essays,* 5th ed., 3 vols., 1891; *Facts and Comments,* 1902; *Autobiography,* 2 vols., 1904.

Collins, *Epitome of Spencer's Philosophy* (preface by Spencer, giving summary of his philosophy), 5th ed., 1905; W. H. Hudson, *Introduction to Philosophy of H. Spencer,* and *Spencer;* Ritchie, *Principles of State Interference;* Sidgwick, *Ethics of Green, Spencer, and Martineau;* Bowne, *Kant and Spencer;* Ward, *Naturalism and Agnosticism,* vol. I; Gaupp, *Spencer;* Duncan, *Life and Letters of Spencer;* books by Royce, Häberlin, Grosse, Schwarze; Ueberweg-Heinze, *op. cit.,* § 59. See also works on English philosophy, pp. 254, f., and under Mill.

Relativity of Knowledge

Like Hamilton, Spencer calls attention to the relativity of knowledge, and shows that this may be inferred from an analysis of the product of thought as well as by an examination of the process of thought. The *most* general cognition at which we arrive cannot be reduced to a *more* general one, and cannot, therefore, be understood, interpreted, or explained. Explanation must eventually bring us down to the inexplicable; and the deepest truth which we can get at, must be unaccountable. Moreover, the process of thought itself involves *relation, difference,* and *likeness;* whatever does not admit of these, does not admit of cognition. Thinking being *relationing,* no thought can ever express more than relations. The primary act of thought through which we discover likeness and difference underlies all our knowledge, both perception and inference. Without it there could be neither perception nor inference, hence the validity of this primary function of mind must be presupposed.

It is the business of philosophy to work out the system of ideas rooted in consciousness, to discover the implications of our basal intuitions, and to construct a related body of propositions. The criterion of the validity of thought is its necessity (the testimony of truth is the inconceivability of the opposite), on the one hand, and the agreement of our results with actual experience, on the other.

If knowledge is relative in the sense indicated, it follows that we can know only the finite and the limited. The Absolute, the First Cause, the Infinite cannot be known, since it cannot be likened to, or differentiated from, anything else. We can, however, always relate things to an Absolute; indeed, we must have an Absolute to which to relate them,—a relative is itself inconceivable except as related to a real non-relative,—the relative presupposes an Absolute. Hence, we can know things in relation to one another and to an Absolute. If we could not relate them to an Absolute, they would not be known; indeed, they would themselves be absolutes. We reach the consciousness of a substance that underlies all phenomena. It is impossible to get rid of the consciousness of an actuality lying behind appearances; and from this impossibility results our indestructible belief in that actuality (*realism*). The Absolute itself, however, cannot be related to anything else: there is no head under which it can be brought, hence it is unknowable. The unknowableness of the Absolute is not only proved deductively, from the nature of our intelligence, but also inductively, by the facts of science: we cannot comprehend ultimate scientific ideas, such as space, time, matter, motion, force, the ego, the origin of mind, and so forth.

Nevertheless, the fact that we can form no notion of the Absolute is no reason for denying its existence. Science and religion can agree on this point: there is an Absolute Being behind all phenomena. Religion seeks to interpret this universal substance for us; it has given us all kinds of definitions of it, but the more advanced a religion is, the more it understands that the Absolute is a complete mystery. Thought continues to seek for some definition of it, to form some idea of it, and there is no objection to this, so long as it is remembered that the forms in which we endeavor to express it are merely sym-

bols. We are compelled to conceive it, vaguely, as the objective correlate of our subjective feeling of activity, or muscular strain, that is, as power, or force. Noumenon and phenomenon are two sides of the same change, of which we are obliged to regard the last as no less real than the first.

This objective power, which is the necessary correlate of the subjective feeling of force, must be thought of as persistent. It is inconceivable that something should become nothing; when we say that something becomes nothing, we are establishing a relation between two ideas, one of which does not exist. By the persistence of power we mean the persistence of some cause that transcends our knowledge and conception. In asserting it, we assert an unconditional reality without beginning and end. The sole truth which transcends experience by underlying it, is the persistence of force. It is the basis of experience, and must, therefore, be the scientific basis of any scientific organization of experiences. To this an ultimate analysis brings us down; and on this a rational synthesis must build up.

Persistence of Force

By the indestructibility of matter we mean the indestructibility of the *force* with which matter affects us. This truth is made manifest, not only by analysis of the *a posteriori* cognition, but equally so by analysis of the *a priori* one. Another general truth is the continuity of motion. It is inconceivable that something,—motion,—should become nothing. And yet movements are constantly disappearing. The fact is, translation through space is not itself an existence, and hence the cessation of motion, considered simply as translation, is not the cessation of an existence, but is the cessation of a certain *sign* of existence. That is, the space-element in motion is not in itself a thing. Change of position is not an existence, but the manifestation of an existence. This existence may cease to display itself as translation, but can do so only by displaying itself as strain. This principle of activity, now shown by translation, now by strain, and often by the two together, is not visible; the principle of activity which motion shows us, is the objective correlate of our subjective sense of effort. The continuity of motion is really known to us in terms of force.

Force is of two classes: force by which matter demonstrates

itself to us as existing, and force by which it demonstrates itself to us as acting (called energy). Energy is the common name for the power shown alike in the movements of masses and in the movements of molecules. Each manifestation of force can be interpreted only as the effect of some antecedent force: no matter whether it be an inorganic action, an animal movement, a thought or a feeling. Either mental energies, as well as bodily ones, are quantitatively correlated to certain energies expended in their production and to certain other energies which they initiate; *or else nothing must become something, and something must become nothing.* We must either deny the persistence of force or admit that every physical and psychical change is generated by certain antecedent forces, and that from given amounts of such forces neither more nor less of such physical and psychical changes can result.

The basal principle of science, then, is the principle of the conservation of energy: no energy can originate or be lost. This principle Spencer does not seek to prove experimentally; indeed, it is, according to him, presupposed in all experimentation. It is a necessity of thought, a postulate: we cannot *conceive* of something coming from nothing or going into nothing; the principle is implied in the notion of causality or is identical with it. We are compelled to assume something as persisting.

Mind and Matter

The Absolute or Unknowable manifests itself in two great groups of facts which are diametrically opposed: subjective and objective, ego and non-ego, mind and matter. But it is the one force or power that expresses itself in both; both what we think and our thinking itself are different kinds of force. And both the physical and the psychical are subject to the same laws of experience. If the mental and the material are conceived as two irreducible phases of the Absolute, then mind cannot be derived from matter, the material cannot pass into the psychical, as motion passes into heat. In the earlier editions of the *First Principles* and the *Psychology,* Spencer assumed that it could; afterward, however, he saw the impossibility of explaining consciousness by the principle of the conservation of energy interpreted physically. But he went on applying the formula of evolution, which is stated in terms of force, matter, and motion, to all phenomena,

including those of life, mind, and society. This is what gives his system the appearance of materialism, as which it is often attacked, although he himself warns us against interpreting it as such. The Absolute is unknowable; we can interpret it in materialistic or in spiritualistic terms; in either case we are employing mere symbols. A power the nature of which ever remains unintelligible to us, and which we cannot think of as limited in space or in time, produces certain effects in us. We embrace the most general of these under the terms matter, motion, force, and between these effects there exist certain similarities of connection, the most constant of which we embrace as laws of the highest certainty.

We are limited in our knowledge to the relative phenomena, to the inner and outer expressions of the Absolute. It is our business, as philosophers, to discover the traits common to all phenomena, or to find the universal law of things. Such a law we have in the law of evolution. We note various phases in the process of evolution: (1) concentration (as seen in the formation of a cloud, in the sand-heap, in the primitive nebula, in the organism, and in society); (2) differentiation, or the separation of the mass from its environment, and the formation of special masses within it; (3) determination, the formation of the differentiated parts into a unified, organized whole, the parts being different and yet in mutual relation with one another. This is what distinguishes evolution from dissolution, in which we have differentiation, but not organization. In determination, there is differentiation of parts and integration or concentration of parts into a whole. In this sense, evolution is the passage from a state of indefinite, incoherent homogeneity to a state of definite, coherent heterogeneity. This law is derived inductively, but it can also be reached by deduction from the primary principle of the persistence of force, which, as we have seen, Spencer identifies with the law of causation, from which follow: the indestructibility of matter, the continuity of motion (potential and actual), the persistence of relations among forces, the transformation and equivalence of forces, including mental and social forces, the law of the direction of motion, and the unceasing rhythm of motion. The law of universal synthesis is the law of the con-

Law of Evolution

tinuous redistribution of matter and motion. Evolution consists in the integration of matter and the dissipation of motion; dissolution consists in the absorption of motion and the disintegration of matter. When both concentration and differentiation have reached a state of equilibrium, the climax of evolution has been reached. This state cannot endure because external influences will tend to destroy it. In other words, dissolution is bound to result, and the whole process will begin over again. All this applies not to the universe as a whole, but only to the particular wholes which appear in our experience.

The universal principles, obtained in the *First Principles,* are applied by Spencer to the various forms of existence,—life, mind, society, and conduct. They are postulated as true and are employed to prove the special truths of biology, psychology, sociology, and ethics: the latter are illustrations of universal truths; universal truths are explanations of the special truths. Thus, the law of evolution applies to all phenomena; the special laws discovered in the various fields of investigation will, therefore, be found to come under the universal law, or to be expressions of this law. Such empirical laws or truths are deductively proved when they are shown to be special cases of the universal law.

Biology

Life is a continuous adaptation of internal (physiological) relations to external relations. The organism not only receives impressions, but undergoes changes in consequence, which enable it to react upon subsequent changes of the external world in a specific way. That is, inner changes take place in the organism which adapt it to external relations: there is reciprocal action between internal and external events. The organism cannot maintain itself unless it evolves a system of *inner* relations corresponding to the external relations. The more intimate the correspondence between the inner and the outer relations, the more highly developed is the organism. The most perfect life would be that in which there is complete adaptation, or harmony, between internal and external relations.

Organic forms have not arisen from inorganic matter, but from an original structureless organic mass, or homogeneous protoplasm, under the influence of external causes. Differences are produced in the organic tissue in accordance with the opera-

tion of the universal law of evolution; that is, the original heterogeneous mass differentiates. The species arise as a result of the interaction between the organism and the external world. Morphological and physiological differentiation is the direct result of the differentiation of external forces; astronomical, geological, and meteorological conditions change slowly, but the changes have been continuous for millions of years. Variations occur in the organism through external causes, and, if adapted, are preserved by natural selection. Changes are produced in the relation of the physiological units composing the organism by the continuous functioning of the parts (function precedes structure) and are transmitted to progeny (inheritance of acquired characters). Natural selection alone, therefore, according to Spencer, fails to explain the origin of species; and Darwin exaggerates the influence of this indirect mode of evolution. The organism adapts itself to an external impression, and such adaptation brings about a new state of equilibrium in the organism.

Psychology

Physics examines external phenomena as such; psychology, internal phenomena as such; physiology investigates the connection and relation between the internal and the external. Subjective psychology is introspective: it studies the feelings, ideas, emotions, and volitions, which accompany the visible adaptations of the inner relations, and inquires into the origin and reciprocal relations of states of consciousness. Psychical occurrences and nerve-action are the inner and outer sides of one and the same change. What is, objectively considered, a nervous change, is, subjectively considered, a phenomenon of consciousness. Objective psychology does not study mental processes as such, but considers them in their relation to human and animal actions. As a part of biology, it examines mental phenomena as functions by means of which internal relations are adapted to external relations.

Consciousness arises when impressions become so numerous as to necessitate their arrangement in a series: when the organism cannot adapt itself to its environment without such a serial arrangement. Consciousness is, therefore, defined as a form of adaptation of serially arranged inner states to outer states. But it is not a mere sum of feelings and ideas; there is a substantial something or combining medium behind them, which, however,

is unknowable, for the same reason that all ultimates are unknowable. We can, however, study the changing states or modifications in which this substance manifests itself. It is the business of psychology to discover the units of consciousness, the elements of which it is composed. Analysis of the phenomenal aspects of consciousness reveals ultimate units, which Spencer regards as " something of the same order as that which we call a nervous shock,"—as the mental equivalent of a nervous shock. Just as the different sensations are made up of common units, so a perception is composed of units or atoms of feeling. The mental unit or atom is irreducible to the material unit or atom. We conceive the material atom as resistance, in analogy with our own feeling of effort, that is, we read into the material atom our own consciousness of activity. In the same way, we interpret our mental events in material terms. Spencer finds in conscious life the same features which are exhibited in all relative reality: concentration, differentiation, and determination; consciousness is an evolution and can be understood only as a process of development, as a continuous series of gradations, from reflex action to instinct, memory, and reason. These are merely different degrees or stages of intelligence, which pass into one another imperceptibly, corresponding to the gradually increasing complexity and differentiation of external conditions. Memory and reason, for example, arise from instinct. Primary inference is entirely instinctive. Volition appears when automatic action becomes impossible, owing to the growing complexity of the situation. We have already seen how Spencer derives the principles of knowledge from the experience of the race. In the same evolutionary way he explains the feelings; the feelings of anger, justice, sympathy, which are original in the individual, are the result of the constant struggle of our ancestors with the environment.

External World

It is not true that we are originally conscious only of our sensations, and that we *infer* the existence of objects outside of us. Idealism is a disease of language; it lives only in our words, not in our thoughts. Reason which undermines the assertions of perception destroys its own authority. Realism is forced on us by the basal law of consciousness, the universal postulate of reason. It is

inconceivable that there should be no object when I feel it and see it. We are compelled to think an extra-mental reality, and we are compelled to think it as force, as the objective correlate of the subjective feeling of force or feeling of muscular tension, which we experience in ourselves and which is the universal symbol of the unknowable objective existence or persisting something. This unknown reality is also symbolized in our ideas of space, time, matter, and motion.

This *transfigured realism,* as Spencer calls it, takes the place of crude realism. It holds that the things represented in our consciousness are not images, or copies, or pictures, of the objective reality, but symbols which have as little in common with the realities they represent as letters have in common with the psychic states for which they stand. But that there is something beyond consciousness is an inevitable conclusion; to think otherwise is to think of change taking place without an antecedent. "There is some ontological order whence arises the phenomenal order we know as space; there is some ontological order whence arises the phenomenal order we know as time; and there is some ontological nexus whence arises the phenomenal relation we know as difference." Such knowledge of the external world is greatly limited, but it is the only knowledge which is of use to us. All we need to know is not the outer agencies themselves, but their persistent relations, and this knowledge we have. An ever-present sense of real existence is the very basis of our intelligence. There ever remains with us a sense of that which exists persistently and independently of conditions. We cannot form a conception of this absolute existence; every notion which we frame is utterly inconsistent with itself. From the impossibility of getting rid of the consciousness of an actuality lying behind appearances results our indestructible belief in that actuality.

In the Preface to the *Data of Ethics,* Spencer declares all the preceding parts of his task, as a synthetic philosopher, to be subsidiary to his *Principles of Morality.* His purpose had been, ever since the appearance of his first work, *The Proper Sphere of Government* (1842), to find a scientific basis for the principles of right and wrong in conduct at large. In order to understand the meaning of moral

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conduct, he tells us, we must comprehend conduct as a whole, the conduct of all living creatures and the evolution of conduct, and we must examine it in its physical, biological, psychological, and social aspects; in other words, study it in the light of the results of the other sciences.

Such a study will lead us to define conduct either as acts adjusted to ends or the adjustment of acts to ends, and will show us that the most highly evolved and, therefore, ethically best conduct is such as makes life richer and longer for the individual performing it, for his offspring, and for the beings among which he lives. The limit of evolution is reached in a permanently peaceful society, in which every member achieves his ends without preventing others from achieving theirs (justice), and in which members give mutual help in the achievement of ends (beneficence). Whatever facilitates the adjustments of each, increases the totality of the adjustments made, and serves to render the lives of all more complete. We call good or bad acts which subserve or hinder life, only on the supposition that life brings more happiness than misery (optimism). The good is universally the pleasurable (hedonism). Actions are *completely* right only when, besides being conducive to future happiness, special and general, they are immediately pleasurable. A large part of human conduct is not *absolutely* right, but only *relatively* right because entailing some pain. The ideal code of absolute ethics formulates the behavior of the completely adapted man in the completely evolved society. Such a code will enable us to interpret the phenomena of real societies in their transitional states, full of miseries due to non-adaptation, and to form approximately true conclusions respecting the nature of the abnormalities and the courses which tend most in the direction of the normal.

Spencer insists that the lives of the units in the social groups are always the ultimate end of morality, not the welfare of society as such. The integrity of society is a means to the welfare of the units, hence whatever threatens this integrity will hurt the units. In the beginning, egoism is strong and altruism weak; hence the relative moral code emphasizing those restraints on conduct which the presence of fellow-men entails. It prohibits acts of aggression and commands restraints making coöperation

possible (justice), as well as enjoins spontaneous efforts to further welfare (beneficence). Sympathy is the root of both justice and beneficence. Since the ideal is the greatest amount of individual perfection and happiness, egoism must come before altruism: each creature shall take the benefits and evils of its own nature, inherited or acquired. But altruism, too, is essential to the development of life and the increase of happiness, and self-sacrifice no less primordial than self-preservation. The egoistic satisfactions of each unit in a society depend on such altruistic actions as being just, seeing justice done, upholding and improving the agencies for the administration of justice, and improving others physically, intellectually, and morally. Pure egoism and pure altruism are both illegitimate. Under increasing social discipline, sympathetic pleasures will come to be spontaneously pursued to the fullest extent advantageous to each and all. Eventually, every one will be eager to surrender his egoistic claims, while others, similarly natured, will not permit him in any large measure to do this.

Spencer offers an evolutionary hedonism, combining the teachings of traditional English Utilitarianism with the new theory of evolution. This is possible from his standpoint, because, in his opinion, the most highly evolved conduct yields the greatest amount of happiness. He also distinguishes his *rational* Utilitarianism from the *empirical* Utilitarianism of his predecessors, on the ground that his system of ethics deduces the rules of morality from fundamental principles supplied by the various sciences upon which it rests.

The ethical ideal, then, is the production of perfect and happy individuals: the survival of the fittest individuals and the spread of the most adapted varieties. This end can only be realized when each individual receives the benefits and the evils of his own nature and its consequent conduct. But since group-life is essential to the survival of the fittest, every individual has to carry on that conduct subject to the restriction that it shall not in any large measure impede the equal conduct of others. In the case of defensive war, individuals may be further restricted, even to the extent of the sacrifice of life. Justice, therefore, demands that each mature man be free to do what he wills, provided he infringe not the

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equal freedom of any other man. Rights, truly so-called, are corollaries of the law of equal freedom: every man has the right to act up to a certain limit but not beyond it.

From these premises Spencer argues against the modern socialistic State. All-embracing State functions, he holds, characterize a low social type; and progress to a higher social type is marked by relinquishment of functions. The incorporated mass of citizens has to maintain the conditions under which each may gain the fullest life possible compatible with the fullest lives of fellow-citizens. The State must prevent internal aggressions and protect its members from foreign invasion: when it goes beyond that, it transgresses justice. Extension of State functions has proved disastrous all along, while only legislation which has been guided by considerations of equity has proved successful. Moreover, the various non-governmental agencies do best under the stress of competition. Competition likewise impels them to improve, to utilize the best appliances, and to get the best men. The social needs at large are also best subserved in this way. Finally, State interference has an evil effect on character. The nature which we have inherited from an uncivilized past, and which is still very imperfectly fitted to the partially-civilized present, will, if allowed to do so, slowly adjust itself to the requirements of a fully-civilized future. The discipline of social life which has done so much in these few thousand years, will, in the course of time, do what has to be done. And it is impossible for artificial molding to do that which natural molding does. Spencer is bitterly opposed to Socialism; he thinks it is coming, and that it will be a great misfortune to the race, but that it will not last. He is not to be understood as hostile to mutual aid and voluntary coöperation; indeed, he believes that a voluntary coöperation characteristic of industrialism will come to predominate, in which the units will be molded to serve the purposes of the aggregate and that the molding will be spontaneously achieved by self-adjustment to the life of voluntary coöperation. He accepts the *laisser-faire* theory because he believes that the general happiness can be realized only by letting individuals work out their own salvation, without undue interference by the State.

70. New Idealism in England and the United States

At the beginning of the nineteenth century, German idealistic thought, based on Kant, found its way into England through the great leaders of literature, Coleridge, Wordsworth, Carlyle, and Ruskin, and began to influence both empiricism and intuitionism, John Stuart Mill as well as Whewell and Hamilton. But a serious study of the new German philosophy was not undertaken until after the appearance of J. H. Stirling's *Secret of Hegel* in 1865; since which time a group of vigorous thinkers, profoundly influenced by Kant and Hegel, and indeed by the entire idealistic movement, have taken the leadership in British thought. We mention the names of Thomas Hill Green, Edward Caird, John Caird, F. H. Bradley, and B. Bosanquet.

Influence of German Idealism

The first great work of the Neo-Hegelian school, as it has been called, was Green's *Introduction to Hume* (1875), which was followed by E. Caird's *Critical Account of the Philosophy of Kant* (1877), the predecessor of his larger book, *The Critical Philosophy of Kant* (2 vols., 1889), and by a large number of expositions and translations of German philosophers, to which additions are being constantly made. James Ward (born 1843; *Naturalism and Agnosticism,* 3d ed., 1907; *The Realm of Ends,* 1912) is an idealist of Lotze's type, who teaches pluralism and substitutes the notion of a creative God, as the unity of the world, for the Absolute of the monists. The idealistic philosophy, partly through the mediation of English Neo-Hegelianism, and partly through a direct study of German thought, has also won a large following in the United States, counting many professors of philosophy in the universities among its adherents, with Josiah Royce at their head.

What is common to the representatives of this school is the emphasis they place upon the organic conception of mind and knowledge in opposition to the atomistic treatment characteristic of English associationism; their repudiation of mechanism as a universal theory; and their view that the world of experience constitutes the subject-matter of philosophy. The English philosophers did not adopt the *a priori* or dialectical methods of the German teachers nor uncritically accept their results, but,

following Green's hint, " worked over " the entire material of German idealism in a fresh and independent manner, retaining, however, the fundamental principles of the movement inaugurated by Kant.

On the entire school see: Forsyth and Seth, mentioned on pp. 254, f.; last German edition of Falckenberg, *History of Modern Philosophy;* Ueberweg-Heinze, *op. cit.,* § 61; bibliography in Ueberweg-Heinze. For contemporary British philosophy, see J. S. Mackenzie, *La philosophie de Grand-Bretagne, Revue de métaphysique et morale,* vol. XVI, 5, pp. 583-606; for contemporary philosophy in the United States: Frank Thilly, *Philosophie américaine contemporaine,* same place, and in *Studies in Language and Literature in Honor of J. M. Hart;* for contemporary idealism in general: Chiappelli, *Revue philosophique,* September, 1911, and Chiappelli's book, *Dalla critica al nuovo idealismo;* for contemporary philosophy: Perry, *Present Tendencies in Philosophy.* See also bibliography, pp. 563, f.

Green

Thomas Hill Green was born in Birkin, Yorkshire, in 1836, the son of the rector of the parish. From Rugby he went up to Balliol College, Oxford, where he spent the rest of his life as student, fellow, tutor, lecturer, and professor. After lecturing on ancient and modern history and ancient and modern philosophy, he was chosen professor of moral philosophy, in 1878, a position which he held until his death in 1882. In addition to his academic duties, Green devoted himself faithfully to practical educational, political, and social work; he helped to introduce reforms into his college; acted as member of the town-council; served on the Royal Commission for reforming popular education in England; was interested in the temperance movement, the ethical movement, and charity work. He always manifested a warm sympathy for the humbler classes and an abiding faith in democracy. Bryce says of him that " people came to respect his character with its high sense of duty, its simplicity, its uprightness, its earnest devotion to an ideal, even more than they admired his intellectual powers."

Introduction to the Philosophy of Hume, first published 1874 in Green's and Grosse's edition of Hume's works; *Prolegomena to Ethics,* 1883; *Lectures on Principles of Political Obligation,* 1895. Works edited by Nettleship, 3 vols., containing all but the *Prolegomena.*

Memoir by Nettleship, in *Works,* vol. I (also separate); Fairbrother, *Philosophy of Green;* R. B. C. Johnson, *The Metaphysics of Knowledge, Being an Examination of T. H. Green's Theory of Reality;* Sidgwick, *Lectures on Green, Spencer and Martineau;* Grieve, *Das geistige Princip in der Philosophie Greens;* G. F. James, *Green und der Utilitarismus;* Muirhead, *The Service of the State:* Four Lectures on the Political Teaching of Green; Ritchie, *The Principles of State Interference;* Pringle-Pattison, *Hegelianism and Personality;* McCunn, *Six Radical Thinkers.* See also articles in *Mind, Philosophical Review,* and *International Journal of Ethics.*

The philosophical standpoint of Green is that of objective idealism, which he developed under the influence of the German idealists and in opposition to the traditional English conceptions of the world and of life. On the basis of Kant's criticism and the idealistic metaphysics of his successors, he attacks the empiricism of Hume, the hedonism of Mill, and the evolutionism of Spencer, and seeks to supplement natural science with a spiritualistic metaphysic. His philosophy is an attempt to do justice to the opposing tendencies of his time,—to rationalism and empiricism, religion and science, pantheism and theism, Greek culture and Christianity, the theory of perfection and Utilitarianism, libertarianism and determinism, individualism and universalism. Man for Green is not merely a child of nature: how could a being that is merely a result of natural forces form a theory of those forces as explaining himself? Man is a spiritual being and as such not a member in the series of natural events (phenomena). There is in him a principle not natural, and the specific function of this principle is to render knowledge possible. The same spiritual principle that makes knowledge possible has another expression, which consists in the consciousness of a moral ideal and the determination of human action thereby. Without the assumption of such a spiritual self, there can be neither knowledge nor morality.

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Natural science deals with the natural, the phenomenal, the temporal and spatial, with matters of fact which are ascertainable by observation and experience. Philosophy, or metaphysics, deals with the spiritual or noumenal, the principle of which these facts are the expression. The fault of the empiricists and the evolutionists is that they treat that which produces this phenomenal order as the product of this order. There can be no knowledge of nature without a unifying, organizing spiritual principle; so far Green agrees with the *Critique* of Kant. But he goes beyond it in concluding with the post-Kantian idealists, that there can be no order of nature itself without such a principle. Nature is a manifold, and yet there is unity in it; hence, we must interpret it in analogy with self-consciousness, and regard it as a spiritual cosmos, as a system of related facts, rendered possible by an eternal intelligence. That there is such

an all-uniting consciousness, is implied in the existence of a world. *What* it is, we can know only through its acting in us: it enables us to have knowledge of a world and a moral ideal.

The question arises, What is man's place in such a universe? As a knowing, self-conscious being, man exists as free activity,—as activity that is not in time, not a link in the chain of natural becoming,—which has no antecedents other than itself. Self-consciousness has no origin, it never began because it never was not. All the processes of brain and nerve and tissue, all the functions of life and sense, including the successive phenomena of our mental history, are determined by the universal consciousness. But human consciousness itself is a reproduction of the universal mind, at least so far as it is synthetic and self-originative. We are not so much determined by the universal consciousness as made the subjects of its self-communication. The evolution theory, Green thinks, does not affect this view. The human organism may have evolved out of the animal; the animal organism may have been modified so, in countless generations, that an eternal consciousness could realize itself and reproduce itself through its functions.

Man's Place in Nature

Green shows that a mere succession of impressions or sensations is not knowledge, that knowledge is not possible without a self that has these sensations and organizes them. Similarly, he points out, a mere succession of animal wants, or impulses, or appetites, does not constitute *human* action: it is not the same as a subject presenting such wants to himself. An appetite or animal want is a natural event, but not a motive proper: it does not move to a distinctively human action unless it is presented by a self-conscious subject to himself, unless, in other words, he consciously makes the want or impulse his own, adopts it, identifies himself with it, and strives to bring into real existence the ideal object of which he is conscious in the impulse or want. Merely to be pushed into action by an animal appetite is not human action or conduct. When a man identifies himself with one of the impulses, or passions, or influences, or tendencies towards different objects, he *wills*. His willing is a desire in which the man enacts *himself*, as distinct from one which acts upon him. Now, it is true, the kind of good a person

presents to himself depends on his past passion and action and on circumstances, is due to the past history of his inner life (determinism). But throughout the past experience, he has been an object to himself, and thus the author of his acts. He is, therefore, responsible for the kind of good that moves him now. Besides, he can conceive a better state for himself and can, therefore, seek to become, and become *in the future,* other and better than he is now (free will).

It is because man can conceive a better state of himself, can seek to realize this state, can will, that he is a moral agent. He can do this because he is a self-conscious subject, a reproduction of the eternal self-consciousness. The idea of a better state is a communication in germ of the ideal, or ultimate end, in God's mind. This idea operates in a man by keeping before him an object which he presents to himself as absolutely desirable. It has been the moralizing agent in human life. Ethics

What, then, is the moral good? It is that which satisfies the desire of a moral agent. The true good is an end in which the effort of a moral agent can really find rest, it is an end which his basal self, his real will, regards as an unconditional good, as something having absolute worth, as absolutely desirable. Now man has the conception of something absolutely desirable *in himself.* This self is a self affected by many interests, also by interests in other persons. The other men are ends to me; or rather, they are part of *the* end, included in it, included in the end for which I live in living for myself. That is, I conceive as the highest good the realization of human personality, the perfection of the human soul, the unfolding of its capacities; and in striving after this goal I needs must help other souls; there must be at work in my mind the idea of an absolute and common good, good for me and others. With this idea, however restricted in range it may be, there is given, in promise and potency, the ideal of which the realization would be perfect morality, the ideal of a society in which every one shall treat every one else as a neighbor, in which to every rational agent the well-being or perfection of every other such agent shall be included in that perfection of himself for which he lives.

It is said that we should not be what we are, morally, if it

had not been for the action upon our ancestors of law and authoritative custom. This is true. But such law and custom are themselves the products of rational beings, of beings with ideals. Besides, the individuals submitting to them recognize an interest in them, set a value on these forms of behavior which require them to restrict their inclination to pleasure.

At first, the moral ideal is only a demand unconscious of the full nature of its object, but it is different from the desire for pleasure. At its lowest, it is a demand for some well-being which shall be common to the individual desiring it with others; and only as such a demand does it yield those institutions of the family, the tribe, and the State, which further determine the morality of the individual. The natural development of institutions, and reflection on them as well as on the well-reputed habits of action which have been formed in their maintenance and as their effect, help to influence the formation of a more adequate conception of the end or demand. An ever-widening conception of the range of persons involved results, and the ideal of a universal society coextensive with all mankind develops.

We have no adequate idea of the perfect life, but the ideal is the perfection of the *whole* man and the perfection of man *in society*. Such a life must be determined by one harmonious will,—a will of all which is the will of each,—a devoted will. By such a devoted will Green means nothing abstract, but a whole world of beneficent activities, which the devoted will shall sustain and coördinate. Moreover, he holds that the moral value of an action depends on the motives or the character which it represents, assuming, however, that the truly moral motive will always produce moral acts.

Green exalts the self-sacrificing, social type of goodness, the type of the reformer, and in this gives expression to the spirit of our times. But he seems to have even a higher regard for the saint, for the religious type of goodness, for the medieval type of perfection. The most final form of moral endeavor, he tells us, is a spiritual act in which the heart is lifted up to God, in which the whole inner man goes forth after an ideal of personal holiness. This has an intrinsic value, not derived from any result beyond itself to which it contributes. Both the good will (the social will) and this spiritual act have intrinsic value;

the difference is that the practical expressions of good will have also value as means, because they issue in ameliorations of human society. But, after all, the purpose of all these ameliorations is to produce such a holy heart. After all, the supreme value for man is man himself in his perfection. Hence, the practical type of goodness and the more self-questioning or consciously God-seeking type are each intrinsically valuable, because the value of each rests on character, heart, and will. Neither type is barren of effects, only the effects in the case of the reformer are more overt and transient, while in the case of the saint they are more impalpable and immanent.

The truth in Green's thought is this: the purpose of all social devotion and reform is, after all, the perfection of man on the spiritual side, the development of men of character and ideals. Green expresses the idea in language that has a religious tinge: he speaks of holiness as a lasting mode of this perfection; of the spirit of self-abasement before the ideal of holiness, as a state of mind having the highest value. The final purpose of all moral endeavor must be the realization of an attitude of the human soul, of some form of noble consciousness in human personalities. Social reform is a good thing, but social reform must have some end beyond the promotion of mere physical comfort and material satisfaction. It is well enough to feed and house human bodies, but the paramount question will always be: What kind of souls are to dwell in these bodies?

Among modern writers on ethics who have been influenced by Kant and Green as well as by Utilitarianism (in so far as that theory finds the criterion of moral conduct in its effect on human welfare) are: J. S. Mackenzie, *Manual of Ethics,* 1892; J. H. Muirhead, *Elements of Ethics,* 1892; Rashdall, *Theory of Good and Evil,* 1907, *Ethics,* 1913; J. Dewey, *Ethics* (with J. H. Tufts), 1908. (For other representatives of idealistic ethics see Thilly, *Introduction to Ethics,* chap. vii.)

Bradley's Metaphysics

The most subtle and best known of contemporary English idealistic thinkers is F. H. Bradley (born 1846), the Zeno of modern philosophy, as he has been called, whose metaphysical system is presented in its maturest form in *Appearance and Reality.*

The Presuppositions of Critical History, 1874; *Ethical Studies,* 1877; *The Principles of Logic,* 2 vols., 1883; *Appearance and Reality,* 1893;

articles in *Mind.* On Bradley see references on p. 550; Rashdall, *The Metaphysic of Bradley;* articles in philosophical journals; Höffding, *Moderne Philosophen.* Cf. the work of Bosanquet, *The Principle of Individuality and Value,* 1911.

With the German idealists Bradley agrees that metaphysics is an attempt to know reality as against mere appearance; or the study of first principles or ultimate truths; or the effort to comprehend the universe, not simply piecemeal or by fragments, but somehow as a whole. We have a knowledge of the Absolute, certain and real, though incomplete. Since man has an instinctive longing to reflect on ultimate truth, it is well that the attempt to think about and comprehend reality be as thorough as our nature permits. With Fichte, Schelling, Hegel, and the Romanticists he regards the discursive understanding as incompetent to understand the world. A critical examination of a number of ways of regarding reality (the notions of primary and secondary qualities, substantive and adjective relation and quality, space and time, motion and change, causation and activity, the self, things-in-themselves) reaches the negative result that they are all self-contradictory: we can discover no unity in phenomena; everything turns out to be mere appearance. Appearances, however, exist, that is absolutely certain. But though appearance is inconsistent with itself, and cannot, therefore, be true of the real, it cannot be divorced from reality. The question arises, What is the nature of this reality to which appearances belong? Can we say more of it than that it exists? Is it merely Kant's thing-in-itself or Spencer's Unknowable? Bradley conceives ultimate reality as a self-consistent whole embracing all differences in an inclusive harmony: the bewildering mass of phenomenal diversity must be at unity and self-consistent; for it cannot be elsewhere than in reality. Moreover, its contents are nothing but sentient experience; feeling, thought, and volition are all the material of existence, and there is no other material actual or possible. It is impossible for us finite beings to construct this absolute life in its detail, to have the specific experience in which it consists; but we can gain an idea of its main features because these are within our own experience, and the idea of their combination is, therefore, in the abstract, quite intelligible to us.

At this point, Bradley joins the ranks of those who seek for help, in solving the world-problem, in other functions of the mind than intellect. He does not, however, appeal to mystical intuitions to bring him face to face with the Absolute, but finds in ordinary human experience a hint of the meaning of ultimate reality. We have the experience of a whole in mere feeling or immediate presentation. This whole contains diversity, and, on the other hand, is a harmony. It serves to suggest to us the general idea of a total experience, where will and thought and feeling may all once more be one. We can form the general idea of an absolute experience in which phenomenal distinctions are merged. Hence, Bradley concludes, we have real knowledge of the Absolute, positive knowledge built on experience, and inevitable when we think consistently.

Immediate Feeling and Thought

Mere thinking, therefore, will not bring us into the promised land. Thought is relational and discursive: it shows a dissection and never an actual life. If it ceases to be this, it commits suicide; and yet if it remains this, how does it contain immediate presentation? Thought aims to reach an immediate, self-dependent, all-inclusive individuality, but in reaching it, it would lose its own character. Bradley tries to solve this dilemma by showing that it can form the *idea of* an apprehension, something like feeling in directness, which contains all the character sought by its relational efforts and so satisfies it. Merely immediate feeling will tell us nothing of the Absolute, nor will mere discursive relational thinking; but we can understand the Absolute if we try to come as near to immediate feeling or apprehension as we can, that is, if we form an idea of it. The entire reality will be merely the object thought out in such a way that mere thinking is absorbed. This same reality will be feeling that is satisfied completely. In both these cases, we possess the immediacy and strength of simple apprehension, and are not forced by its inconsistencies to pass into the infinite process, that is, to keep on relating and dissecting without ever seeing things whole. So, too, volition, if willed out, becomes our Absolute; for here, too, we reach the identity of idea and reality, or unity in diversity. It is true, we cannot imagine how in detail the outline of such an immediate experience is filled up,

but we can say that it is real and that it unites certain general characters within the living system of one undivided apprehension.

The Absolute, then, is knowable in the way described. It is a harmonious system, not the sum of things; it is the unity in which all things coming together are transmuted, in which they are changed all alike, though not changed equally. In this unity, relations of isolation and hostility are affirmed and absorbed. Error, ugliness, and evil are transmuted and absorbed in it; they are all owned by and all essentially contribute to the wealth of the Absolute. There is not one mode to which the others belong as its adjectives, or into which they can be resolved. Nature, taken in the sense of a bare skeleton of primary quality, is dead, and cannot be called either beautiful or adorable. So understood, it has but little reality, it is an ideal construction required by science, and it is a necessary working fiction. We must add to our conception of nature the secondary qualities, joys and sorrows, affections, the emotions excited by it, beauty. All the special sciences, physical as well as mental, deal with fictions only: soul and body are both abstractions, appearances, or special aspects of reality; and both idealism and materialism are half-truths.

The Absolute

Reality is one experience. We can discover nothing in it that is not either feeling or thought or will or emotion or something else of the kind. Does not solipsism follow from this? No, says Bradley, finite experience never, in any of its forms, is shut in by a wall. In our first immediate experience the Whole Reality is present; the Whole, as a substantive, is present in each of its adjectives. A finite experience already partially *is* the universe. The total universe, present imperfectly in finite experience, would, if completed, be merely the completion of this experience. What I experience is in one aspect the state of myself or my soul. But it cannot be the mere adjective of my self. The self is an outgrowth of reality, a phenomenon; how then can experience be its product?

Reality, then, is not merely *my* experience; nor does it consist of souls or selves. The Absolute is not personal because it is more, it is superpersonal. It is personal in the sense that it is nothing but experience, that it contains all the highest

that we can possibly know and feel, and is a unity in which the details are utterly pervaded and embraced. But the term is misleading; the Absolute stands above, and not below its internal distinctions, includes them as elements of its fullness.

The Absolute has no history of its own, though it contains histories without number. They are but partial aspects in the region of temporal appearance. To deny progress to the universe, leaves morality where it was. As to immortality, a personal continuance is possible, and it is but little more. Still, if any one can believe in it and finds himself sustained by that belief,—after all it is possible. But it is better to be quit of both fear and hope than to lapse back into any form of degrading superstition.

Truth is one aspect of experience. So far as it is absolute, it does give the general type and character of all that possibly can be true and real. And the universe in this general character is known completely. It is not known, and never can be known, in all its details. It is not known, and it never, as a whole, can be known, in such a sense that knowledge would be the same as experience or reality. Truth is the whole world in one aspect, an aspect supreme in philosophy, and yet even in philosophy conscious of its own incompleteness.

Royce

The leader of the idealistic school in the United States is Josiah Royce (born 1855), professor at Harvard University, a man of broad scholarship, speculative grasp, and literary taste. Our world of common sense, according to his teaching, has no fact in it which we cannot interpret in terms of ideas, so that this world is throughout such stuff as ideas are made of. All the reality that *we* can attribute to it, in so far as *we* know and can tell what we mean thereby, becomes an ideal. There is, in fact, a certain system of ideas forced upon us by experience, which we have to use as the guide for our conduct. We call it the world of matter. But is there not something yonder that corresponds in fact to this series of experiences in us? Yes, but it is itself a system of ideas outside of our minds but not outside of every mind. If my world yonder is anything knowable at all, it must be in and for itself essentially a mental world. It exists in and for a standard, a

universal mind, whose system of ideas simply constitutes the world. Minds I can understand because I am myself a mind. An existence that has no mental attribute is to me wholly opaque. Either a mind yonder or else the unknowable, that is your choice. But nothing absolutely unknowable can exist; the notion of it is nonsense. Everything knowable is an idea, the content of some mind. If capable of being known by a mind, this essence is then already essentially ideal and mental. The real world must be a mind or a group of minds.

But how do I ever reach those ideas of the minds beyond me? In one sense you never *do* or can get beyond your own ideas, nor ought you to wish to do so, because all those other minds that constitute your outer and real world are in essence one with your own self. The whole world is essentially *one* world, and so it is essentially the world of one self and *That art Thou.* The self that *means* the object is identical with the larger self that possesses the object, just as when you seek a lost idea. This deeper self is the self that knows in unity all truth. There is then but one self, organically, reflectively, consciously inclusive of all selves, and so of all truth. It is the Logos, problem-solver, all-knower. Absolutely the only thing sure from the first about this world is that it is intelligent, rational, orderly, essentially comprehensible, so that all its problems are somehow solved, all its darkest mysteries are known to the Supreme Self. This Self infinitely and reflectively transcends our consciousness, and, therefore, since it includes us, it is at the very least a person, and more definitely conscious than we are; for what it possesses is self-reflecting knowledge, and what is knowledge aware of itself, but consciousness? The natural and spiritual orders, the physical and the moral orders, the divine and the human, the fatal and the free, may, according to Royce, be reconciled on Kant's doctrine of the transcendental or extra-temporal freedom and the temporal necessity of all our actions.

This account of Royce's philosophy is taken from his *Spirit of Modern Philosophy.* In his large systematic work, *The World and the Individual,* the theory is worked out with great detail and applied to the interpretation of the facts of nature and of man. Partly owing to the nature of the problems with which

he is dealing, and partly, perhaps, in order to ward off the criticism of exaggerating the intellectualistic element, Royce places greater emphasis upon the volitional and purposive side of experience in these later volumes than in the earlier presentations of his views. " To be means simply to express, to embody the complete internal meaning of a certain absolute system of ideas,—a system, moreover, which is genuinely implied in the true internal meaning or purpose of every finite form of the idea, however fragmentary." The final form of the idea, the " final object sought when we seek Being, is (1) a complete expression of the internal meaning of the finite idea with which, in any case, we start our quest; (2) a complete fulfilment of the will or purpose partially embodied in this idea; (3) an individual life for which no other can be substituted."

In other words, Royce seeks to escape the charge of intellectualism by emphasizing the active aspect of ideas, and the charge of mysticism, by emphasizing the place of the individual self in the absolute self.

In his *Philosophy of Loyalty,* an eloquent presentation of his ethical theory, Royce deduces the idealistic world-view from the basal moral principle, loyalty to loyalty, that is, loyalty to a cause that makes possible the greatest amount of loyalty or devotion to a cause. My causes must form a system, they must constitute a single cause, a life of loyalty; they must make universal loyalty possible. Loyalty, therefore, implies faith in a universal cause, in a highest good, in a highest spiritual value. If this principle is to have any meaning, if it is no mere illusion, there must be a spiritual unity, a unity in which all values are preserved. The principle of loyalty is not only a guide of life, it shows us or reveals to us an eternal all-embracing unity of spiritual life, a being that preserves and upholds truth and goodness. We have here a moral argument for the existence of God, similar to that presented in Kant's *Critique of Practical Reason.*

Works: *The Religious Aspects of Philosophy,* 1885; *The Spirit of Modern Philosophy,* 1892; *The Conception of God,* 1897; *Studies of Good and Evil,* 1898; *The World and the Individual,* 2 vols., 1900, 1901; *Outlines of Psychology,* 1902; *Herbert Spencer,* 1904; *The Philosophy of Loyalty,* 1908; *W. James and Other Essays,* 1911; *The Sources of Religious Insight,* 1912; *The Problem of Christianity,* 2 vols., 1913.

Among American writers who have been influenced by Kant, the post-Kantians, Lotze, or kindred thinkers of Germany, England, and France, either through an independent study of these philosophers or through American teachers of philosophy, we mention: W. T. Harris (+ 1909), J. Watson, G. T. Ladd, G. H. Howison, A. T. Ormond, B. P. Bowne (+ 1910), J. E. Creighton, J. G. Hibben, E. Albee, Mary W. Calkins, R. M. Wenley, H. Gardiner, C. B. Strong, J. H. Tufts, A. K. Rogers, C. M. Bakewell, A. O. Lovejoy, J. A. Leighton, and W. E. Hocking. The younger members of this group (notably Creighton, Bakewell, Lovejoy, Albee), in defending idealism against the criticisms of pragmatism and neo-realism, have developed this doctrine in such a way as to include what they regard as the valid elements in these opposing schools.

CONTEMPORARY REACTION AGAINST RATIONALISM AND IDEALISM

We find in present-day thought many signs of dissatisfaction, not only with idealism, which has long been the predominant system, but also with the methods and results of rationalistic science and philosophy in general, both of which, so it is held, destroy the freedom of the individual and leave no room for human values. Whether, with natural-scientific mechanism, we proceed from moving particles of matter or, with objective idealism, from logical concepts or universal purposes, human life is said to be degraded to a mere epiphenomenon. Many attempts have been made in the history of speculation to escape the consequences to which human thinking seemed to lead,—attempts which are being renewed to-day in slightly varying forms. The opposition to rationalism, however, is not confined to those whose chief concern is to save the individual from the determinism of both naturalism and spiritualism, but exists in the ranks of natural science itself, among thinkers influenced in their theory of knowledge by Hume and the positivists. We may distinguish several lines of thought in the contemporary reaction against the traditional school, some of which, it is to be noted, are followed by men of widely differ-

New Tendencies

ent temperaments,—by skeptics, faith-philosophers, and rationalists alike. According to some, the human intellect is unable to solve the world-riddle: metaphysics is impossible. They hold either that knowledge is limited to the study and description of the facts of experience or that it is a mere instrument in the service of the will to live or that its conclusions,—even in the field of natural science,—are mere conventions, or symbols, or approximations to the truth; or they accept every one of these positions. Other thinkers, agreeing that the intellect or the discursive understanding cannot comprehend the meaning of reality, discover a surer source of knowledge in other phases or functions of the human soul,—in feeling, belief, immediate or pure experience, will, or intuition,—and seek in them a way of escape from skepticism, mechanism, determinism, atheism, and all the cheerless doctrines against which the individual revolts. This movement is not new in philosophy, as we have seen; indeed, we find anti-intellectualistic or anti-rationalistic tendencies within the ranks of the idealistic school itself,—in Fichte, Schelling, Hegel, Lotze, Eucken, Windelband, Münsterberg, Renouvier, Bradley;—and it is in this school that the leading innovators of the day have been reared and with which they continue to have much in common. Another group of men, who resemble Herbart in many respects, defend rational intelligence against its scientific and philosophical critics, but oppose the organic conception of idealism, its monism, and its alleged subjectivism, regarding analysis as the true method of a scientific philosophy, and pluralism and realism as its logical results. There are also those who lay the chief stress of their opposition on the spiritualistic phase of the traditional views and return to a natural realism, conceiving things not as the appearances of a subjective or objective mind, but as wholly independent of mind, and mind as something that has arisen in the process of the evolution of the things themselves.

We shall consider some of the contemporary writers who give expression to the spirit of discontent which characterizes latter-day philosophical thought.

Merz, *History of European Thought in the Nineteenth Century*, 3 vols.; Perry, *Present Philosophical Tendencies;* Thilly, *Romanticism and Rationalism, Phil. Rev.*, March, 1913, and *The Characteristics of the*

Present Age, Hibbert Journal, October, 1911; van Becalaire, *La philosophie en Amérique;* Lyman, *Theology and Human Problems;* Walker, *Theories of Knowledge;* Fouillée, *La pensée;* A. Rey, *La philosophie moderne;* articles on contemporary philosophy by Benrubi, Mackenzie, Thilly, Amendola, Höffding, Calderon in *Revue de métaphysique et de morale,* September, 1908; Chiappelli, *Les tendences vives de la philosophie contemporaine,* in *Rev. phil.,* March, 1910, and *Dalla critica al nuovo idealismo;* Berthelot, *Un romanticisme utilitaire;* Ruggiero, *La filosofia contemporanea;* Gaultier, *La pensée contemporaine;* Goldschmidt, *Wandlungen in der Philosophie der Gegenwart;* Eucken, *Main Currents of Modern Thought;* Stein, *Philosophische Strömungen der Gegenwart;* Riehl, *Philosophie der Gegenwart;* Windelband, *Die philosophischen Richtungen der Gegenwart,* in *Grosse Denker;* Höffding, *Moderne Philosophen* (in French: *Philosophes contemporains*), and *Englische Philosophie;* Baumann, *Deutsche und ausserdeutsche Philosophie der letzten Jahrzehnte;* Ueberweg-Heinze, *op. cit.,* Part III, vol. II; Falckenberg, *Geschichte der neuern Philosophie,* 7th ed.; W. Caldwell, *Pragmatism and Idealism,* 1913.

71. The New Positivistic Theory of Knowledge

Mach

Ernst Mach (professor of physics and philosophy, born 1838; *Analysis of Sensations,* 1886, 5th ed. 1906, *Popular Scientific Lectures,* 4th ed. 1910) offers a theory of knowledge based on the phenomenalism of Hume and the positivists: the world consists solely of our sensations, and the thing-in-itself is an illusion. Not axioms or *a priori* truths, but immediate pure experience constitutes the basis of his theory of knowledge. The aim of science is the complete description of facts, that is, of the contents of our consciousness; its sole business is to discover the connection of the not-further-analyzable elements of sensation,—to recognize these connections instead of seeking to explain them by metaphysical presuppositions. The way to develop a universal physical phenomenology, one embracing all fields, a physics free from all hypotheses, is by analogies. Science begins with hypotheses, but these are mere temporary expedients to enable us to understand the facts, a kind of indirect description, and are gradually replaced by direct observation, that is, verified by experience or the appearance of sensations. All science consists in a schematic reproduction of facts, in thought. It would be futile to mirror the world in thought if it were not possible to find something relatively constant in manifold change. In every scientific judgment a great number of

observations are embraced or compressed: our concepts and judgments are abbreviated thought-symbols for groups of sensations, a kind of shorthand method of expressing the facts. This is *the principle of the economy of thought.* A law is nothing more than a comprehensive and condensed statement of facts, a statement only of that phase of the facts which is important to us. Matter is merely a uniform complexus of sensations. The self, likewise, is a group of sensations. The relatively more fixed and constant phase of the sensation-complex is impressed upon the memory and experience in language (body). The complex of memories, moods, feelings (connected with a particular body) which is called the ego, is another relatively constant phase. Sensations considered as dependent on my body constitute the subject-matter of psychology; the same sensations considered as dependent on other bodies form the subject-matter of physics. Bodies do not produce sensations, but complexes of sensations constitute bodies. The world does not consist of mysterious things-in-themselves that produce, in interaction with the ego, other mysterious things called sensations. The aim of science is to connect the less constant, not yet sufficiently established relations with the more constant, established ones.

Although this theory limits knowledge to the field of our sensations and is, therefore, opposed to metaphysics,—a futile undertaking that merely disturbs the economy of science,—Mach seeks a philosophical basis for it in voluntarism. Knowledge is an instrument of the will, the result of the needs of practical life (pragmatism). Thoughts are not the whole of life; they are, as it were, fugitive flashes of light, intended to illuminate the path of the will. We need a world-view that will bring us into some sort of relation with the environment: in order to obtain it in an economic manner, we create science. The agreement of thought and observation is a means of adaptation and selection. The notions of body and ego are mere temporary makeshifts for practical orientation in the world, and must be given up; likewise the notions of atoms, forces, and laws. Every practical and intellectual need is satisfied as soon as our thoughts succeed in reproducing the sensible facts. We are satisfied when our thoughts bring before us the totality of the sense-data which belong together, so that they almost seem to

be a substitute for them. Mach speaks of an impulse to idealize, schematize, and complete facts.

The empirio-critical school, of which R. Avenarius (1843-1896; *Kritik der reinen Erfahrung,* 1888, f., *Der menschliche Weltbegriff,* 1891) is the founder, follows along similar lines pursued by Mach. The only method of knowledge is description based on exact perception. Scientific philosophy is the descriptive determination of the form and content of the universal notion of experience. *Pure* experience is the experience common to all possible individual experiences, and the business of knowledge is to eliminate the illogical individual elements. We are approximating to such a pure empirical conception of the universe. Originally, all men had the same notion of the world; but by " introjecting " into experience thought, feeling, and will, by splitting it up into outer and inner experience, into subject and object, reality has been falsified. By eliminating " introjection," we restore the original *natural* view of the world: pure experience.

Avenarius

Views similar to those of Mach are expressed by James Clerk Maxwell (1831-1879; *Scientific Papers*), William Clifford (1845-1879; *Seeing and Thinking,* 1879, *Common Sense of the Exact Sciences,* 1885), Karl Pearson (born 1857; *Grammar of Science,* 1892, 2d ed. 1900), and H. Hertz (1857-1894). According to Henri Poincaré (1857-1913; *La science et l'hypothèse,* 1902, transl., *La valeur de la science,* 14th ed., 1906), the axioms of science are convenient definitions or conventions; our choice among all the possible conventions is guided by experimental facts, but is arbitrary and is limited only by the necessity of avoiding all contradiction.

72. Pragmatism

William James (1842-1910) was influenced in his thinking by his biological studies, by English empiricism, and by the teaching of Charles Renouvier. It was Renouvier's masterly advocacy of pluralism, he himself tells us, that freed him from the monistic superstition under which he had grown up. The " block-universe," the rigoristic, deterministic systems of both materialistic and spiritualistic monism, did not satisfy him: " if everything, man included, is the mere effect of the primitive nebula or the infinite substance, what becomes of moral responsibility, freedom of action, individual

James

effort, and aspiration; what, indeed, of need, uncertainty, choice, novelty, and strife?" Does not the individual become a mere puppet in the hands of the absolute substance, whether conceived as universal matter or as universal mind? Such a system cannot satisfy all the demands of our nature, and hence cannot be true. The test, then, of a theory, of a belief, of a doctrine, must be its effect on us, its practical consequences. This is the *pragmatic* test. Always ask yourself what difference it will make in your experience whether you accept materialism or spiritualism, determinism or free will, monism or pluralism, atheism or theism. One is a doctrine of despair, the other a doctrine of hope. "On pragmatic principles, if the hypothesis of God works satisfactorily, in the widest sense of the word, it is true."

The test of truth, then, is its practical consequences: the possession of truth is not an end in itself, but only a preliminary means to other vital satisfactions. Knowledge is an instrument; it is for the sake of life, life not for the sake of knowledge. James enlarges this pragmatic or instrumental conception so as to include in the idea of practical utility: logical consistency and verification. True ideas are those that we can assimilate, validate, corroborate, and verify. Ideas that tell us which of the realities to expect count as the true ideas. You can, therefore, say of truth that it is useful because it is true, or that it is true because it is useful. "Truth in science is what gives us the maximum possible sum of satisfactions, taste included, but consistency both with previous truth and novel fact is always the most imperious claimant."

Even with these important additions to the pragmatic formula, it is anti-intellectualistic in the sense that, in order to be true, a philosophy must satisfy other than logical demands. And the practical moral and religious demands favor pluralism, freedom and individualism, spiritualism, and theism, according to James. These are the conceptions in which the will believes and to save which our pragmatist repudiates the intellect as the absolute judge of truth. Still, consistency is always the *most imperious* claimant.

Although the absolutistic hypothesis that perfection is eternal, aboriginal, and most real, has a perfectly definite meaning and

works religiously, the pluralistic way agrees with the pragmatic temper best. For it sets definite activities at work; a pluralistic world can only be saved piecemeal and *de facto* as the result of the behavior of a lot of *eaches*. We may believe, also, that there is a higher form of experience extant in the universe than our human experience; on the proofs that religious experience affords we may well believe that higher powers exist and are at work to save the world on ideal lines similar to our own.

James reaches the same results from another side, from the side of radical or pure empiricism, which opposes both the classical rationalism and the classical English empiricism. It is not true that whatever is rational is real; *whatever is experienced is real.* Only, we must take experience as it exists before it has been manipulated by conceptual thinking,—experience in its purity and primitive innocence,—if we would reach reality. We must go behind the conceptual function altogether and look to the more primitive flux of the sensational life for reality's true shape. Philosophy should seek this kind of living understanding of the movement of reality,—not follow science in vainly patching together fragments of its dead results. Philosophy is more a matter of passionate vision than of logic, logic only finding reasons for the vision afterwards.

With German idealism James agrees that the scientific understanding mutilates reality, and he agrees with it, also, in the view that our ordinary sense-experience does not reveal it in its true colors. But, not unlike Bradley, he puts his faith in a living unsophisticated human experience. Reality is *pure* experience independent of human thinking; it is something very hard to find; it is what is just entering into experience and yet to be named, or else it is some imagined aboriginal presence in experience, before any belief about the presence has arisen, before any human conception has been applied. It is what is absolutely dumb and evanescent, the merely ideal limit of our minds. We may glimpse it, but we never grasp it; what we grasp is always some substitute for it which previous human thinking has peptonized and cooked for our consumption. Yet, this immediate experience is a unity in diversity; the unity is as original as the diversity. Empiricism is, therefore, wrong in saying that our psychic life consists of a multiplicity of inde-

pendent sensations, and rationalism is wrong in saying that these are combined by categories in the unity of a soul. The notion of a combining medium called soul is superfluous because there are no independent elements to combine. Both conceptions are abstractions. Reality is, in part, the flux of our sensations, coming we know not whence; partly, the relations that obtain between our sensations or between their copies in our mind; and, partly, previous truths. Some of these relations are mutable and accidental, others are fixed and essential, but both are matters of immediate perception. Relations, categories, are matters of direct experience, not different from the things or phenomena: ideas and things are " consubstantial," made of the same stuff.

James seems to vacillate between two views: reality is pure experience, experience independent of all thought, to which the life of the infant or semi-comatose person approximates; and reality is the entire field of the adult consciousness, experience permeated with thought. Perhaps his meaning is that the latter form of it grows out of the former. There *is* a sensible flux, he tells us, but what is *true of it* seems from first to last largely a matter of our own creation. The world stands really malleable, waiting to receive its final touches at our hands. Reality is not ready-made and complete from all eternity, but still in the making, unfinished, growing in all sort of places where thinking beings are at work. Truth grows up inside of all the finite experiences; they lean on each other, but the whole of them, if such there be, leans on nothing. Nothing outside of the flux secures the issue of it; it can hope salvation only from its own intrinsic promises and potencies. Behind the bare phenomenal facts there is *nothing,* no thing-in-itself, no Absolute, no Unknowable; it is absurd to attempt to explain the given concrete reality by an assumed reality of which we can form no idea except through symbols drawn from our experience itself. This sounds like subjective idealism, but is not intended as such by James, who never doubted the existence of an extra-mental world; the pure original experience is not subjective, but objective; it is the primordial stuff which grows conscious.

Radical empiricism makes for pluralism: experience shows us multiplicity, diversity, opposition, and not a block-universe, not the completely organized harmonious system of the Absolu-

tists or Monists, in which all differences and oppositions are reconciled. Besides, the pluralistic universe satisfies the demands of our moral nature, which the absolutistic universe does not: it is justified by the pragmatic method. Indeed, monism, too, is not a mere doctrine of the intellect; its acceptance depends on its consequences: it satisfies the æsthetic and mystical impulses of some natures. But it does not account for our finite consciousness; it creates a problem of evil; it does not account for change; and it is fatalistic. Pluralism takes perceptual experience at its face value, and the concrete perceptual flux, taken just as it comes, offers in our own activity-situations perfectly comprehensible instances of causal agency or free will. There is room for change, for novelty, for the unconditioned in the world (tychism or fortuitism). And pluralism is melioristic: the world may be saved on condition that its parts shall do their best. The melioristic universe is conceived after a social analogy, as a pluralism of independent powers. It will succeed just in proportion as more of these work for its success. If none work, it will fail; if each does his best, it will not fail. And in such a world man is free to risk realizing his ideal.

Theism is the only conception of God that will satisfy our emotional and volitional nature. God is a part of the universe, a sympathetic and powerful helper, the great Companion, a conscious, personal, and moral being of the same nature as ourselves, with whom we can come into communion, as certain experiences (sudden conversions, faith-cure) show. To be sure, this theistic hypothesis cannot be completely proved, but neither can any system of philosophy be proved; every one of them is rooted in the will to believe. The essence of faith is not feeling or intelligence, but will, the will to believe what cannot be scientifically demonstrated or refuted.

Works of James: *The Principles of Psychology,* 2 vols., 1890; *The Will to Believe,* 1897; *Talks to Teachers,* 1899; *Varieties of Religious Experience,* 1902; *Pragmatism,* 1907; *The Meaning of Truth,* 1909; *A Pluralistic Universe,* 1909; *Some Problems of Philosophy,* 1910; *Memories and Studies,* 1911; *Essays in Radical Empiricism,* 1912.

Flournoy, *The Philosophy of W. James,* transl.; Boutroux, *W. James,* transl. by Henderson; Royce, *W. James and Other Essays;* Pratt, *What is Pragmatism?;* Schinz, *Anti-Pragmatism;* Murray, *Pragmatism;* Hébert, *Le pragmatisme;* article on "Pragmatism" by F. C. S. Schiller in the *Britannica;* many articles in the philosophical journals.

John Dewey (born 1859) is no less radical than James in his opposition to the old philosophies. He does not tire of flouting the old methods, which he conceives as aiming at realities lying behind and beyond the process of nature and as carrying on the search for these realities by means of rational forms transcending ordinary modes of perception and inference. Such problems, he thinks, have no real meaning, and are solved very simply by evaporating. He protests against setting up a universe, in analogy with the cognitive side of human nature, as a system of fixed elements in fixed relations, be they mechanical, sensational, or conceptual, and making all the other phases of man's nature,—beliefs, aversions, affections,—mere epiphenomena, appearances, subjective impressions or effects in consciousness; against relegating concrete selves, specific feeling and willing beings with the beliefs in which they declare themselves, to the phenomenal; and against a world in which man's strivings are already eternally fulfilled, his errors already eternally transcended, his partial beliefs already eternally comprehended, in which need, uncertainty, choice, novelty, strife have no place. Reality is for him, the evolutionist, not a completely given, ready-made, fixed system, not a system at all, but *changing, growing, developing things.* A real philosophy must abandon inquiry after absolute origins and absolute finalities in order to explore specific values and specific conditions that generate them. The sole verifiable and fruitful object of knowledge is the particular set of changes that generate the object of study, together with the consequences that flow from them. No intelligible question can be asked about what is assumed to lie outside,—about the whole essence back of special changes, about an intelligence that shaped things once for all, or about the ultimate goal of good. The interesting questions to the evolutionistic philosopher are not the old questions of ontology, but *practical, living, moral, and social questions:* how special changes serve and defeat concrete purposes, how things are even now shaping particular intelligences, how to realize the direct increments of justice and happiness that intelligent administration of existent conditions may beget and that present carelessness or stupidity will destroy or forego. To idealize and rationalize the universe at large is to shift a burden of responsibility upon the

Dewey

shoulders of the transcendent. Philosophy must become a method of moral and political diagnosis and prognosis;—the world is in the making, and we must help to make it.

Such a new philosophy calls for a revision of the theory of thinking, for a new evolutionary logic which frankly starts out from the fact of thinking *as inquiring* and purely external existences as terms in inquiries. The revised theory of thinking will construe validity, objectivity, truth, and the test and system of truth, on the basis of what they actually mean and do within the inquiry-activity. Dewey sees in thinking an instrument for the removal of collisions between what is given and what is wanted,—a means of realizing human desire, of securing an arrangement of things which means satisfaction, fulfilment, happiness. Such a harmony is the end and test of thinking: success in this sense is the end and test. When the ideas, views, conceptions, hypotheses, beliefs, which we frame succeed, secure harmony, adjustment, we call them true. Successful ideas are true. We keep on transforming, changing our ideas until they work, that is, we make them true, *verify* them. The effective working of an idea, its success, *is* its truth. When I say the idea works, it is the same as saying it is true. Successful working is the essential characteristic of a true idea. The success of the idea is not the cause nor the evidence of its truth, but *is* its truth: the successful idea is a true idea. The test or criterion of truth lies in the harmonized reality effected by the idea. Wherever there is an improved or tested idea, an idea which has made good, there is a concrete existence in the way of a completed or harmonized situation. We must not, however, separate the achieved existence from its process. When it is taken just as given, separated from its process, it is neither truth nor a criterion of truth, but just a state of facts like any other. There are cases in which an idea ceases to exist as idea just as soon as it is made true. Scientific ideas, however, like the law of gravitation, operate in many other inquiries no longer as mere ideas, but as *proved* ideas.

Thinking serves human purposes, is useful, removes collision, satisfies desire; and its utility, its teleology, is its truth. The human will, in other words, instigates thinking, which is an instrument for realizing human aims. The fixities (atoms, God)

have existence and import only in the problems, needs, struggles, and instrumentalities of conscious agents and patients. We have a universe in which uncertainty, doubtfulness, really inhere, and in which personal attitudes are real.

The revision of the theory of thinking also brings the principle of belief into its own. Belief,—sheer direct unmitigated personal belief,—reappears in science as working-hypothesis. Beliefs are the most natural and most metaphysical of all things; knowledge is the human and practical outgrowth of belief; knowledge is an organized technique for working out the implications and interrelations of beliefs, and for directing their formation and employment. Beliefs, therefore, modify and shape reality; and empirical conscious beings genuinely determine existences. If this is so, there is no need of fear that natural sciences are going to encroach upon and destroy our spiritual values, because we can always translate our values (social and political) into existences (institutions). The world in which Dewey is interested is the practical social world of living, working individuals.

The world is in the making and will always be in the making,—we shape it to our ends;—and in this process the thinking and belief of conscious personal beings play an active part. It is to be remembered that *knowing* is not the sole and genuine mode of experiencing for Dewey. Things,—anything, everything,—are what they are experienced as being, and every experience is some thing. Things are experienced as known, but they are also experienced æsthetically, morally, economically, and technologically; hence to give a just account of anything is to tell what *that* thing is experienced as. This is the fundamental postulate of immediate empiricism. If you want to find out what any philosophical term,—subjective, objective, physical, mental, cosmic, cause, substance, purpose, activity, evil, being, quantity,—means, go to experience and see what it is experienced as. The individual is not merely a knower, but an emotional, impulsive, willing being; the reflective attitude is evoked by the will, the basal or primal side of self.

Works of Dewey: *Psychology,* 1886; *Study of Ethics,* 1891; *Studies in Logical Theory* (with his pupils), 1903, 2d ed., 1909; *Ethics* (with J. H. Tufts), 1909; *Influence of Darwin on Philosophy, and Other*

Essays, 1910; *The School and Society,* 1899; and many articles in the philosophical journals.

Other pragmatists are: F. C. S. Schiller (*Studies in Humanism,* 1907, *Personal Idealism,* with Sturt and others, 1902, *Plato or Protagoras?* 1908, *Formal Logic,* 1912); H. Sturt (*Personal Idealism,* 1902, *Idola theatri,* 1906); A. W. Moore (*Pragmatism and its Critics,* 1910); H. Bawden (*Principles of Pragmatism,* 1910); Father Tyrrell (*Lex orandi,* 1903, *Lex credendi,* 1906); J. E. Boodin, *Truth and Reality,* 1912; G. Blondel (*L'action,* 1893); W. Jerusalem (*Introduction to Philosophy,* 5th ed., 1910, transl.); H. Vaihinger (*Die Philosophie des Als Ob,* 1911); G. Jaboby (*Der Pragmatismus,* 1909); Papini (*Introduzione al pragmatismo,* 1907, in "Leonardo"). See also article by C. S. Peirce in *Popular Science Monthly,* January, 1878.

The protest against our traditional conceptions reaches a climax in the teaching of the German individualist Friedrich Nietzsche (1844-1900), who, although he wrote before the appearance of American pragmatism, may be regarded as the *enfant terrible* of the whole movement of discontent. He not only antagonizes the old theories and methods, but sweeps away the old values and condemns the entire trend of our modern civilization, considering the historical attitude as the cause of the weakness of our age; strong, reverent, burden-bearing man carries too many heavy strange words and values of the past on his back. It is the function of philosophy, so he declares, to *transform* all values (*Umwertung aller Werte*), to create new values, new ideals, and a new civilization.

Nietzsche

Nietzsche accepts the fundamental notion of Schopenhauer that the will is the principle of existence, but this will he conceives not merely as the will to live, but as the will for power: life is essentially a striving for a surplus of power, and this exuberant instinct is good: *Alles Gute ist Instinkt.* Upon this idea he bases his estimate of the intellect,—of knowledge, science, philosophy, and truth. The mind or intellect is merely an instrument in the hands of instinct, of the will for life and power; it is the "little reason," created by the body; the body and its instincts are the "big reason." "There is more reason in your body than in your wisest wisdom." Knowledge has value only in so far as it preserves and promotes life, or preserves and develops the species; hence, illusion is as necessary as truth. To put truth above error and illusion, to love truth for its own sake instead of as a means of life, is turning things upside down, is a diseased

instinct. Indeed, this ideal of truth for the truth's sake is only another form of asceticism: the denial or negation of life for something else.

Besides, Nietzsche goes on to tell us, there is no such thing as universal truth. The propositions which have been offered as such are errors. Thinking is really inaccurate perception: it looks for similarities and ignores differences, thus producing a false picture of reality. There is nothing permanent, no substance, no universal causal nexus, no purpose in nature, no definite goal; the universe does not care for our happiness or our morality, and there is no divine power outside of it that can help us. Knowledge is a tool for power: utility for preservation is the motive behind the development of the organs of knowledge. We arrange the world in our thoughts in such a way as to make our existence possible, hence we believe in something permanent and regularly recurring. We reduce the confused plurality of experiences offered us, to a rational and manageable scheme by means of formulas and signs which we invent; the purpose being to deceive ourselves in a useful way. In this sense the will for truth is the will to master the plurality of sensations,—to string the phenomena on certain categories. Hence, logic and the categories of reason are simply means of arranging the world for utility-purposes, of arranging it so that we can handle it. But the philosophers have made the mistake of regarding these categories, these formulas, these handy forms, as criteria of truth, as criteria of reality; they have naïvely made this human way of looking at things for the sake of preservation,—this anthropocentric idiosyncrasy,—*the measure of things,* the standard of the " real " and " unreal." And in this way it came to pass that the world was divided into a real world and a seeming world, and that the very world to live in which man had invented his reason,—this world of change, becoming, plurality, opposition, contradiction, war,—was discredited and calumniated; that it, the real world, was called a world of semblance, a mere appearance, a false world, and that the invented fictitious world, the alleged world of permanence, the unchanging, supersensuous world, the false world, was enthroned as the true world.

All we know directly is the world of our desires and instincts;

and all our instincts may be reduced to the fundamental instinct,—the will for power. Every living being strives to increase its power by vanquishing other beings; that is the law of life. The goal is the creation of *supermen,* of a higher type, of a race of heroes; and this cannot be realized without struggle, pain, suffering, and injury to the weak. Hence, war is preferable to peace; indeed, peace is a symptom of death. We are not here for our pleasure, for our happiness; we are not here for any purpose, but being here we must hold our own, assert ourselves or go down. Pity, therefore, which Schopenhauer had made the source of all morality, is bad: it injures him that gives and him that takes; it weakens both the strong and the weak, it saps the strength of the race, and is bad.

It is true that life is terrible, but that is no reason for pessimism. Indeed, pessimism and renunciation are impossible except in a diseased and degenerate race; for the desire for life is too strong in a healthy mind to be overcome by pain and battle. Life is an experiment, a sifting process in which the sheep are separated from the goats. It is selective, aristocratic. It brings out the inequalities in human nature, it shows that men are not equal. Some men are better than others, stronger in body and mind. The better men, the natural-born aristocrats, should have more privileges because they have more duties than the plebeians, the rabble. The best men should rule. Hence democracy, socialism, communism, anarchism are all impossible, they all contradict the ideal, they all prevent the development of strong individuals. Slavery in some form or other has always existed and will always exist. The modern laborer has simply taken the place of the ancient slave. Nor can women have the same rights as men because they are not equal to men in initiative, energy, and will. Our greatest danger to-day lies in the mania for equality.

Our traditional morality is also rejected by Nietzsche because it is based on pity and favors the weak and decadent against the strong. Religion, too, particularly Christianity, is repudiated for the same reason; and his contempt for science and philosophy is to be explained in the same way,—by his glorification of the will for power. Peace, happiness, pity, self-denial, contempt of the world, effeminacy, non-resistance, socialism, communism,

equality, religion, philosophy, and science are all rejected because they contradict life; and all systems of thought and all institutions which regard these things as valuable and worthy to be sought after for their own sakes are symptoms of decadence.*

Among the predecessors of Nietzsche is the extreme individualist Max Stirner (Caspar Schmidt, 1806-1856; *Der Einzige und sein Eigentum,* 1845, transl. by Mackay).

Works of Nietzsche: *Die Geburt der Tragödie,* 1872; *Also sprach Zarathustra,* 1883, ff.; *Jenseits von Gut und Böse,* 1886; *Zur Genealogie der Moral,* 1887. Collected works ed. by Koegel, 1895, ff.; collected letters, 1900, ff. English translations ed. by A. Tille.

E. Foerster-Nietzsche, *Das Leben F. Nietzsches,* 2 vols.; monographs by Dolson, Mügge, Riehl, Vaihinger, Gallwitz, Ziegler, R. Richter, R. M. Meyer, Lichtenberger (French and German); Rud. Eisler, *Nietzsches Erkenntnistheorie und Metaphysik.*

73. Intuitionism of Henri Bergson

The most interesting and popular figure in the anti-rationalistic movement of our day is Henri Bergson (born 1859), whose writings, like those of William James, have found a large number of sympathetic readers outside of academic circles. With the Romanticists, pragmatists, and mystics he proclaims the incapacity of science and logic to penetrate the husk of reality; in the presence of life and movement conceptual thinking stands helpless. Science can apprehend only what is crystallized in death, the waste product of creation, that which stands still, the inert residue that escapes time or becoming, that about which we can make predictions. And yet, the work of the intellect is not without its purpose; it is, as the pragmatists declare, an instrument in the service of the will to live. But it is also more than that, according to Bergson; and pragmatism is only a half-truth. Conceptual thought is well adapted for employment in a dead, static world, in the world of inert matter where mechanism reigns, and here it has won its greatest victories. Where there is no individuality, no inwardness, nothing but dead surface, science and logic have both practical and theoretical

Intellect and Intuition

* Cf. Thilly, *The Philosophy of Friedrich Nietzsche, Popular Science Monthly,* December, 1905, from which parts of the above account have been taken.

worth. When, however, they extend their operations to the world in which everything is moving, growing, becoming, living, they mutilate and falsify the real. Baffled by the infinite variety and change of forms, and taking the whirling flux for illusion, the intellect proceeds to construct a bony skeleton, a rigid framework, and substitutes this as the true reality for the disturbing and unpleasant temporal succession. It keeps forever reading static elements, eternal substances and causes, into the flux, and dropping out, as mere appearance, what does not fit into the logical scheme. The ideal of science is a static world; it translates the flowing time into space relations: for it duration, movement, life, and evolution are mere illusions; it mechanizes them all. Life and consciousness cannot be treated mathematically, scientifically, logically; the scientist who studies and analyzes them in the ordinary mathematical-physical ways, cuts them up, destroys them, and misses their meaning. The metaphysician cannot give us *scientific* knowledge of them; philosophy is and must remain a direct vision of reality, a *Weltanschauung* in the literal sense of the term, an intuition. Intuition is life, real and immediate life envisaging itself. There is something in the universe analogous to the creative spirit of the poet, a living, pushing force, an *élan vital,* which eludes the mathematical intelligence and which can be appreciated only by a kind of divining sympathy, a feeling which approaches nearer to the essence of things than reason. Philosophy is the art of comprehending or seizing the universe in its process, in its vital impetus. Our intuitions are something like instinct,—a conscious, refined, spiritualized instinct,—and instinct is still nearer life than intellect and science. The real, the "becoming," the inward "*durée,*" life and consciousness, we can apprehend only through the faculty of intuition. Only by observing for the sake of observing and not for the sake of acting, will the Absolute reveal itself. Its essence is psychological, not mathematical or logical. A normal philosophy must do justice to both intelligence and intuition, for only by a union of these two faculties will the philosopher succeed in approximating to the truth.

The sharp distinction which Bergson makes between intelligence and intuition, science and philosophy, has its ground in

his dualistically-tinged metaphysics.* Matter is a kind of immense machine without memory; mind or consciousness is a force essentially free and essentially memory, a creative force whose character is to pile up the past on the past, like a rolling snowball, and at every instant of duration to organize with this past something new which is real creation. Consciousness is not a mere arrangement of parts succeeding each other, but an indivisible process in which there is no repetition,—free, creative action. Consciousness is in principle present in all living matter; indeed, life is nothing but consciousness using matter for its purposes. A living being is a reservoir of indetermination and unforeseeability, a reservoir of possible actions, or, in a word, of choice. Life avails itself of a certain elasticity in matter, and turns it to the profit of liberty by stealing into whatever infinitesimal fraction of indetermination that inert matter may present. The animal performs voluntary movements by simply producing the infinitesimal spark which sets off the potential energy stored up in the foodstuffs.

Metaphysics

Consciousness is action that continually creates and multiplies, while matter is action that continually unmakes itself and wears out. Neither the matter constituting the world nor the consciousness which utilizes this matter can be explained by itself; there is a common source of both this matter and this consciousness. The whole evolution of life on our planet is an effort of this essentially creative force to arrive, by traversing matter, at something which is only realized in man and which, even in man, is realized only imperfectly. In seeking to organize matter and to make it an instrument of liberty, consciousness has itself been ensnared: liberty is dogged by automatism and necessity, and in the long run is stifled by it. With man alone the chain has been broken; the human brain can oppose to every contracted habit another habit; it sets necessity to fight against necessity. We are free when our acts spring from our whole personality, when they are the expression of that personality; hence, real acts of freedom are rare in our lives.

Matter plays the rôle both of obstacle and stimulus, causes us to feel our force and also enables us to intensify it. Joy (not pleasure) is a sign which apprises us every time our activity is

* See his article, *Life and Consciousness*, in *Hibbert Journal*, October, 1911.

in full expansion, an emphatic signal of the triumph of life; wherever joy is, creation has been. The ultimate reason of human life is a creation which can be pursued at every moment and by all men alike, the creation of self by self, the continual enrichment of personality by elements which it does not draw from outside, but causes to spring forth from itself. The passage of consciousness through matter is destined to bring to precision,—in the form of distinct personalities,—tendencies or potentialities which at first were confused, and also to permit these personalities to test their force whilst at the same time increasing it by an effort of self-creation. But consciousness is also memory, one of its essential functions is to accumulate and preserve the past; in *pure* consciousness nothing of the past is lost, the whole life of the conscious personality is an indivisible continuity. This leads us to suppose that the effort continues *beyond.* Perhaps in man alone is consciousness immortal.

Works of Bergson: *Time and Free Will,* 1888, transl. by Pogson; *Matter and Memory,* 1896, transl. by Paul and Palmer; *Laughter,* 1900, transl. by Rothwell; *Introduction to Metaphysics,* 1903, transl. by Hulme; *Creative Evolution,* 1910, transl. by Mitchell; *Life and Consciousness,* in *Hibbert Journal,* October, 1911.

Carr, *Bergson;* Le Roy, *A New Philosophy: H. Bergson,* transl. by Brown; A. D. Lindsay, *The Philosophy of Bergson;* J. M. Stewart, *Critical Exposition of Bergson's Philosophy;* Dodson, *Bergson and the Modern Spirit;* Berthelot, *Un romanticisme utilitaire;* Grandjean, *Une révolution dans la philosophie;* Coignet, *De Kant à Bergson;* Brod and Weltsch, *Anschauung und Begriff;* numerous articles in the philosophical journals.

74. Realistic Reaction Against Idealism

Bergson, agreeing with the German idealists, finds scientific knowledge wanting because it analyzes and divides existence; and seeks a method that will do justice to the organic nature of reality. A realistic reaction against idealism has arisen in England and in the United States which regards science as the most certain body of knowledge and looks upon the divorce of philosophy from science as disastrous for philosophy.* In accordance with what it believes to be the spirit of the scientific method, this school rejects the ideal-

Neo-Realists

* See Marvin, *A First Book in Metaphysics,* chap. i.

istic theory of knowledge that relations are internal or organic, and conceives them as not affecting the nature of the things or terms related, that is, as external. A straight line is the same straight line whether it is the radius of a circle, the side of a square, or the altitude of a triangle. The school, therefore, emphasizes analysis,—the very method of knowledge which Hegel and his followers, no less than pragmatists and intuitionists, had repudiated as an inadequate instrument of truth,—and finds itself driven to pluralism rather than to monism. "My philosophy is analytic," says Bertrand Russell, "because it holds that it is necessary to seek the simple elements of which the complexes are composed, and that the complex things presuppose the simple things whereas the simple things do not presuppose the complex things."* This philosophy is also realistic in the sense of considering existence as not depending upon knowledge. "The entities under study in logic, mathematics, physics, and many other sciences are not mental in any proper or usual meaning of the word mental." "The being and nature of these entities are in no sense conditioned by their being known."†

To this school belong the Englishmen Bertrand Russell, G. E. Moore, and S. Alexander; and the six American realists E. B. Holt, W. T. Marvin, W. P. Montague, R. B. Perry, W. B. Pitkin, and E. G. Spaulding, joint authors of *The New Realism,* 1912, and "The Program and First Platform of Six Realists." E. B. McGilvary sympathizes with the realistic movement.

F. J. E. Woodbridge directs his opposition mainly against subjective idealism and the "traditional conception of consciousness as an end-term in a relation." Consciousness, according to him, is itself a relation,—a *relation of meaning,*—which is just as much a relation between things as are space and time. Awareness is nothing but the manifold and irresistible meaning-connections which the things in the conscious situation have. The addition of knowledge to a reality hitherto without it, is simply an addition to it and not a transformation of it. It is not an external mind which knows reality by means of its own ideas, but reality itself becomes known through its own

* Bulletin of the *Société française,* March, 1911. See also Marvin, *op. cit.,* chap. viii.

† Quoted from "The Program and First Platform of Six Realists," *J. of Phil.,* vol. VII, no. 15.

expanding and readjusting processes. The things are not ideas representing other things outside of consciousness, but real things, which, by being in consciousness, have the capacity of representing *each other*, of standing for or implying each other.

Russell, *Foundations of Geometry*, 1901, *Principles of Mathematics*, 1903, *Philosophical Essays*, 1910, *The Problems of Philosophy*, 1911; G. E. Moore, *Principia Ethica*, 1903, *Ethics*, 1912; Marvin, *A First Book in Metaphysics*, 1912; Perry, *Approach to Philosophy*, 1907, *The Moral Economy*, 1909, *Present Philosophical Tendencies*, 1911. See also the articles by all the realists in the philosophical journals.

75. Rationalism and its Opponents *

Merits of Anti-Intellectualism

Peculiar to the anti-intellectualistic philosophies of the present day is their antagonism to ultra-deterministic systems of any kind, materialistic or idealistic. They all plead for a more elastic universe, for a world in which human life can amount to something more than a mere puppet-show or a drama in which the characters simply play the parts cast for them. They all repudiate a world in which freedom, initiative, individual responsibility, novelty, adventure, risk, chance, romance,—life as the individual untouched by philosophy seems to live it,—are lacking; the interest is shifted from the universal to the particular, from the machine-like to the organic, from the intellect to the will, from logic to intuition, from the theoretical to the practical, from God to man. Recent Romanticism demands a world in which the human being shall have a fighting chance, which, with effort, he can fashion to his purposes and ideals, in which he can succeed and fail. It wants the world back again as it revealed itself to ordinary unreflecting common sense.

There is much that is good in these new tendencies. For one thing they have put the old classical systems on their mettle and are making them justify their existence. Without antagonisms, without battles to fight, philosophy easily falls to sleep, sinks into "the deep slumber of a decided opinion." Conflict is better than self-satisfied assurance or indifference. "War is the Father of all and the King of all," in the domain of mind as

* The following pages have been taken from the author's article *Romanticism and Rationalism, Phil. Rev.*, March, 1913.

everywhere else, and there is nothing so dead as an accepted creed. "Both teachers and learners go to sleep at their post," Mill is right, "as soon as there is no enemy in the field." A philosophy that is done, is a philosophy that is done for.

In addition to the important service which the new thinkers have rendered in helping to rejuvenate philosophy, they have also aided in focusing attention upon points that are apt to be lost sight of. They have again pushed to the front the question of the relation of natural science and philosophy, the whole knowledge-problem, and have emphasized the significance of human values in the scheme of things: questions which call for ever new answers with the progress of human inquiry. They have warned us against mistaking the universal framework of reality for reality itself, and have insisted on our keeping close to concrete experience. They protest against a one-sided metaphysic, a metaphysic that fails to do justice to all the varied experiences of mankind and interprets the world in terms of mere *aspects* of experience, conceiving it as a physical, logical, or teleological machine. They refuse to accept as complete the account of reality written by the outward-looking intellect and to picture it in analogy with the *knowing* human mind. They accentuate the dynamic character of reality, the Heraclitean world-view as against the static Absolute of the Eleatics, and conceive being in analogy with the human will.

All these points and many others in the writings of the newest reformers of philosophy are well taken and have been emphasized again and again in the history of speculation. The motives behind their wholesale distrust of the intellect are fear of depreciation of standard moral and religious values, a preconceived metaphysic, and a somewhat narrow conception of intelligence. It should not be forgotten, however, that distrust of reason based on cravings of the will is not necessarily a *bona fide* distrust. What satisfies the will to believe may not satisfy the will to understand our world of experience. The will to believe must itself be rendered intelligible; reasons must be given for accepting its demands, and these reasons must satisfy the will to know. It is necessary to give reasons for taking the side of the will to believe, that is, to appeal to the intelligence, the same intelli-

Appeal to Reason

gence that has helped to free us from the slavery of nature and the slavery of our own superstitions. Such an appeal is made by every anti-intellectualist, yes, by every pragmatist who asks us to accept his theory because it is rational, because it accounts for the facts as he sees the facts, because it is true,—true in the old sense of the word. And reasons are always given, even by faith-philosophers; they construct a world for us in which the will to believe will not constitute an irrational element. Kant accepted the categorical imperative and its implications because he believed in a rational universe and because a universe did not seem intelligible to him in which human reason could demand an irrational thing, a meaningless law.

It would, however, be a valid objection against the competence of the intellect if it could be shown that it falsifies reality, that it compels us to construct a world-view that simply is not true. Such an objection presupposes the possession of a metaphysic or other sources of knowledge which we are able to oppose to the conclusions of reason as something more real and authoritative. If the intelligence saddles us with a block-universe and there is no block-universe, intelligence ought to be drummed out of camp. But the question quite naturally arises: Does the human understanding really squeeze all life out of existence and leave us nothing but a bony skeleton? Does *rational* thought demand an absolutely closed system, one in which nothing exists that was not there before, nothing that cannot be deduced in principle, without a remainder, from preëxistent elements? Does it follow from the very nature of reason that what now is always has been and always will be, that there is nothing new under the sun, that the new is nothing but a rearrangement of the old? If we define reality, in the first place, as rigid, inert blocks of matter that can be pushed and pulled and nothing else, it follows that nothing can come out of it that was not there before. If we conceive reality as mind, and mind as a *thing,* as something that can do nothing unless pushed by something else, or as a static universal purpose, then, again, the world is a closed system: nothing can come into it that was not already there before. But we are not compelled to define reality in either way, and human intelligence is not by nature forced to conceive it so; it is com-

Intelligence and Reality

pelled only to accept the consequences of such a definition if such a definition be accepted. Moreover, this is not the view of reality which the great historical systems have given us; to construe them in this sense is to misconstrue them. It is true, the human mind has its ways of thinking; our very problems follow from the nature of our thought and certain results follow. There is not a single faith-philospher, intuitionist, or pragmatist who does not think in these general human ways, who does not try hard to be consistent, who does not look out for similarities and differences in his experiences, who does not single out and hold fast certain phases of them, and who does not relate them in definite ways. The mind has its ways, and some of these ways, if left to themselves, tend to stretch reality upon a static Procrustean frame to make it fit; there is always danger of one-sidedness in intelligence, that, instinct-like, it will spin the same old web around everything it meets, that it will apply *everywhere* the methods which Kant, Fichte, Schelling, and Bergson allow it to use only in the dead world, that it will try to handle life and consciousness as it would handle its corpses. There *is* this danger, and the thinker who deals largely in abstract formulas often succumbs to it. But it is just the business of philosophy to avoid this very danger, to apply the methods intelligibly; the cure for intelligence is *more* intelligence.

There is nothing whatever in the nature of the human mind to force it to reduce all reality to dead blocks that can be counted, arranged in order, and measured. There is nothing to hinder it from doing justice to the dynamic, living, flowing, galloping phase of experience, to that phase about which the new philosophers are so much concerned. Rationalism is not fatally bound to the mathematical-physical method of procedure and static absolutes, nor prevented by any presuppositions from reaching the conception of a dynamic and developing universe. Hegel assumed such a world and made reason move to keep step with it; or, rather, he could not hinder reason from keeping step, for, in his opinion, rational thought is just such a dynamic process as the world. No Romanticist can be more pronounced in his distrust of mere intelligence than he was of the *Verstand,* and more insistent on avoiding its pitfalls. But he was not, on that account, ready to throw thinking overboard and to take on faith

and intuition as pilots; reason itself provided the remedy for the short-sightedness of the discursive understanding, as he conceived it.

But whether or not Hegel succeeded in his attempt to reproduce in thought the dynamic cosmic process, human reason does not demand a static world for its satisfaction. Nor must we, to be rational, conceive reality, in analogy with the mind of the logician, as a fleshless and bloodless skeleton of categories, or reduce it to a passionless contemplative God. Philosophy has as its aim the interpretation of experience as it finds it; it seeks to understand it, to render it intelligible, to put certain questions to the given and to answer them. It does not seek to spin reality out of *a priori* truths, to construct a conceptual system independently of experience, to shut its eyes and stop up its ears and just think the world out in the dark, as it were. It proposes to look experience squarely in the face, to see things as they are and then to understand them in the only sense in which human beings *can* understand them, that is, in their manifold relations to one another. It will not reject any methods or sources of experiencing that promise to throw light on its business, be they intellectual, artistic, or religious intuitions; but it will not accept any one of them without criticism, any more than it will accept ordinary sense-experience offhand.

Aim of Philosophy

And, so far as can be seen, no new school of philosophy attempts to force its intuitions or wills to believe upon us without giving reasons for our accepting these methods of knowledge rather than others: the only question is whether or not the reasons are adequate. There is always some more or less rational theory behind the view that pure experience, or immediate experience, or intellectual intuition, or sympathetic artistic feeling, or moral or religious faith, gives us the clearest and truest insight into reality. Blind faith in witches and demons is not accepted on its own testimony by those in whom the will to know is strong, and no alleged experience is going to pass unchallenged that cannot give an account of itself.

The inner experiences emphasized and variously named by Fichte, Schelling, Bergson, and countless others, the inner psychic life of man himself, cannot be cast aside or reduced to mere ap-

pearance unless there is ample cognitive warrant for so doing. The protests of the new movements against the mechanization of life and mind may be justified, but they are not protests against intelligence and rationalism; rationalism itself has protested against a static and mechanical view in the persons of a long line of illustrious thinkers ever since the days of Plato. And the protests of the reformers against a spiritual block-universe, against the atomic conception of mental life or the idea of a teleological despotism ruled by an arch-purpose, may be justified, but it is not a valid protest against rationalism, which is in no wise compelled to look at mental life in such a wooden way. Rationalism is committed to nothing but the business of understanding experience, of putting questions to it,—not such as any fool may ask but only such as a wise man can answer.

The Block-Universe

It is true, reason can operate only in a rational world, in a world in which there is likeness besides difference, unity besides plurality, permanence besides change. It does not demand a dead, static world for its workshop; it is not baffled by life and change and evolution, even by creative evolution and novelty, provided creation and novelty are not absolutely capricious: in a topsy-turvy world reason would grow dizzy and shut its eyes. With absolute caprice, with novelty that is utterly without rhyme or reason, that appears and disappears at random and is absolutely unrelated to anything else, neither intelligence nor intuition can do anything whatsoever. There is no meaning in novelty except in relation with the old: where there is no oldness there can be no newness. The entrance of novelty will not, however, put a quietus on rational inquiry. The phenomena of life and the phenomena of consciousness may be unique events in comparison with mechanical occurrence, and rationalism will have to admit their uniqueness if it cannot reduce them to a single principle. It is not the business of human reason to falsify the world of experience, but to understand it; it keeps before itself the ideal of unity and simplicity, but it is not bound to bury all differences in a single grave. It is itself a unity in diversity, a one and many, and it will not do violence to its own nature.

There is nothing to hinder us from calling the method of thought which results in the mechanization of experience *intelli-*

gence and giving another name to the function or functions through which we reach a different conception. We may distinguish, if we will, between intelligence and intuition, *Verstand* and *Vernunft,* regarding the former as the method of scientific study, the latter as the source of metaphysical knowledge of a higher order. But the distinction would be an artificial one, the very kind of distinction against which Romanticists inveigh as cutting up what cannot be cut up. There can be no intuition that is absolutely devoid of intelligence, no philosophy, no knowledge, where intellect is dumb. Radical empiricism, naïve realism, and intuitionism, all represent an effort to get directly at the heart of things, all are expressions of an intense longing for reality, symptoms of metaphysical homesickness. Rationalism can accept any one or all of these heroic attempts at taking reality by storm,—if they can pass muster. But can any experience, pure, immediate, or intuitive, be made the basis of philosophical truth without being inspected by the same intelligence that operates in ordinary life; can this intelligence be silenced, can it lose itself in mere *unintelligent* mystical gazing, and if it can, of what use will it ever be to science or philosophy? No theory that endeavors, as every theory must, to validate its methods and sources of knowledge, can or does refuse to reflect upon its immediate experiences, to analyze them for us, to tell us how they are constituted, and to employ categories in doing all this. The pure experience as described by the new philosophers is not a pure experience at all, but the product of analysis and reflection, the result of the very conceptual operations which they condemn. The voice is Heraclitus's voice, but the hand is the hand of Parmenides.

Intellect and Intuition

If, however, it is insisted that the intellect reveals to us only an external world, physical objects in causal-mechanical relation, then it is true that it does not tell us the whole story. And if the intellect paralyzes everything it lays its eyes on, stops motion, kills life, butchers reality, then, indeed, scientific thinking is inadequate and there is need of a special method or the abandonment of philosophy. The intuitionists are right in throwing logic and concepts overboard, or at least in limiting their depredations to the field of things already dead, if conceptual thought

is guilty of playing such havoc. They are right in holding that sense-perception is not the sole source and sense-perceived things not the sole objects of knowledge. A being capable only of looking outward would miss a body of experiences which mere outward-gazing intelligence can never reach. Living consciousness is an event in the world which living consciousness alone can know. If there can be science only where there are static absolutes, then every attempt to treat life and mind scientifically must be a falsification of them, and science had better let them alone. But it is not necessary to take such a one-sided view of intelligence and knowledge. Science is not limited to outward perception. Intelligence is not limited to the function of chopping things up and counting, measuring, and arranging the bits; synthesis is as much its function as analysis. The two functions imply each other, one is impossible without the other; how could there be counting, measuring, and arranging without either?

Conclusion

Our conclusion then would be this: If anyone finds grounds for supposing that the object of rationalism is to deduce a world from *a priori* principles, to construct an absolute system independently of experience, his hostility to it is fully justified. The aim of all thinking is to interpret experience as we find it, not to spin it out of an *a priori* principle. We are in search of theories, and, if the thing is possible, of a universal theory that will help us to understand what is; and such theories must be laid on the foundations of experience; they cannot hang in mid-air. And though the mind longs for certainty and has for its ideal a system of interrelated judgments, present-day rationalism cannot and does not lay claim to the possession of complete truth. Again, human thinking has its ways or habits, and rationalism is right in recognizing such habits or categories of thought. But they are not mere arbitrary forms and they do not falsify the real. It is natural to suppose that a mind that has grown up in the world should have caught something of its spirit; it is hard to see how a mind could have formed habits in a world that has no habits, or how a mind could live in an environment that knows no law and yet conceive it as obedient to law. If to categorize the world is to falsify it, we are confronted with the double miracle of a sane mind being born in bedlam and remaining sane in bedlam.

Moreover, if rationalism is taken to mean the degradation of the seeming diversity of experience to mere illusion, and the absolute domination of concrete particulars by an abstraction, call it matter, energy, spirit, or God, the protests of pluralism are just. Unity without plurality is death, as plurality without unity is chaos. Indeed, thinking itself would be as absolutely dumb in the presence of absolute monotony as in the presence of absolute chaos. And so would sense-perception and feeling and intuition. Rationalism does not compel us to reduce all processes to a single principle; a world of differences, oppositions, changes is not an irrational world. It is true that knowledge would be impossible in a world in which there are no unities and uniformities, but it is just as true that it would be impossible in a world in which there is neither difference nor change. Rationalism does not prescribe the goal and path of science or philosophy *a priori;* it does not fasten the mind in the strait-jacket of mathematical-physical method; it does not compel us to reduce biology, psychology, and history to physics; it does not force us to reduce everything to static absolutes and block-universes. It leaves ample room for adventure and change; it takes experience as it comes and finds rhyme and reason in it. Even if nature and her laws were conceived as constantly changing, rationalism would not give up the ghost so long as there remained the possibility of discovering a law of change in the changing laws. Only in case there were no law of change, if nature were utterly lawless, would rationalism fail. But in that case, all the other philosophies,—pragmatism, intuitionism, and the rest,—would go down with the wreck, for every one of them is an attempt to understand experience, and none of them could thrive in an irrational world. And in such a world as that nothing would work.

The fundamental postulate of rationalism is that experience is somehow intelligible, that all genuine problems are somehow and sometime soluble; if reason can ask them intelligibly, reason can answer. But the demand for rationality does not necessarily preclude the possibility of freedom, responsibility, change, novelty, evolution, and play into the hands of absolute determinism. It is true, if reality is broken up into a physical series of causes and effects or into a mental series of the same character,

then the concrete particular, thing or person, is caught in the clutches of circumstance, be they mechanical or teleological. Whether he is coerced by the physical machinery or by a universal purpose, man is equally a slave. But why should we interpret our categories of cause, purpose, and evolution in such a wooden way and insist on seeing everything, life and consciousness included, in the form of static absolutes? To conceive them so is to take a decidedly narrow and unhistorical view of reason and intelligence and to give an easy victory to mechanism. The way of escape from the block-universe is not through Romanticism, but through a broad-minded rationalistic philosophy.

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